

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



Entered at the Post Office at Chicago, Ill., for transmission through the mails at second-class rates.

A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. XII.

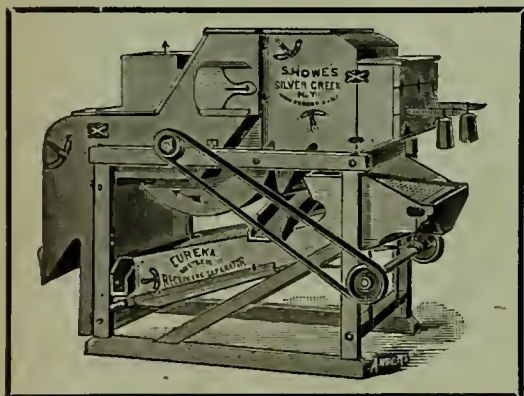
CHICAGO, ILLINOIS, NOVEMBER 15, 1893.

No. 5

SUBSCRIPTION PRICE,
ONE DOLLAR PER ANNUM

THE Eureka Grain-Cleaning Machinery

FOR ELEVATOR USE



COMPRISES

The Eureka Warehouse and Elevator Separator.
The Eureka Double Receiving Separator.
The Eureka Single Receiving Separator.
The Eureka Aspirating Separator.
The Eureka Corn Sheller, Dustless.

For Circulars, prices, etc., address

S. HOWES, SOLE MANUFACTURER, SILVER CREEK, N. Y.

THE E. H. PEASE MFG. CO., RACINE, WIS.

STEAM OR GASOLINE ENGINES,

POWER CAR PULLERS, OAT CLIPPERS,

DUSTLESS ELEVATOR SEPARATORS,

POLISHERS, SEPARATORS, GRADERS,

FLAX REELS AND SPECIAL FLAX MILLS,

Farm and Warehouse Fanning Mills,

GRAIN TESTERS,

SEED TESTERS,

PERFORATED METALS,

WIRE CLOTH,

BAG TRUCKS, SIX WHEEL WAREHOUSE TRUCKS, ETC.

Makers and Jobbers of

MACHINERY AND SUPPLIES

For Grain Elevators, Mills,

MALT HOUSES AND BREWERIES.

IT WILL PAY YOU

To send us your Specifications for Bids.

CATALOGUES FREE.

"SWEEP" OR "TREAD" HORSE POWERS,

SHAFTING, PULLEYS, HANGERS,

PILLOW-BLOCKS, CLUTCHES, COUPLINGS,

GEARS, SPROCKETS, SET COLLARS,

TAKE-UP BOXES, CRANE SPOUTS

LEATHER, RUBBER, COTTON AND LINK BELTING,

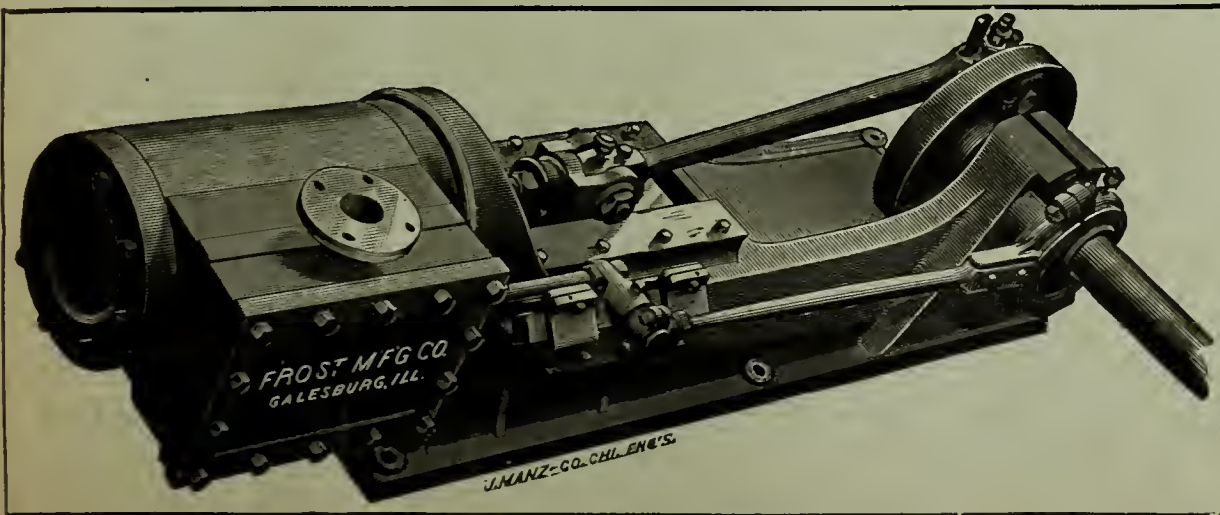
"FLEXIBLE" AND "SWIVEL" GRAIN SPOUTS,

ELEVATOR BOOTS, BUCKETS AND BOLTS,

"SPIRAL" AND "BELT" CONVEYORS,

"PLATFORM," "DUMP," AND "HOPPER" SCALES,

GRAIN SCOOPS AND POWER GRAIN SHOVELS



FOR PRICES AND DISCOUNTS
— ON —

**Elevator Machinery
AND SUPPLIES**
— OF —

EVERY DESCRIPTION,

ADDRESS EITHER STEAM OR HORSE-POWER,

**The FROST MFG. CO.,
GALESBURG, ILL.**

BARNARD & LEAS MANUFACTURING CO., MOLINE, ILLINOIS.

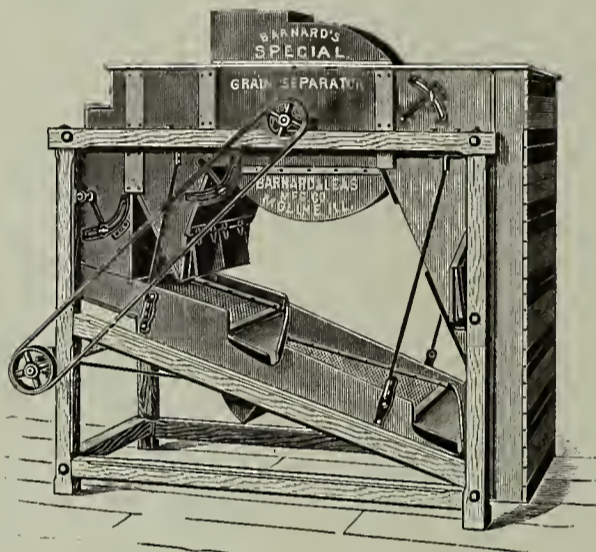
Sole Manufacturers of Barnard's Grain Cleaning Machinery.

ON EXHIBITION AT THE WORLD'S FAIR.

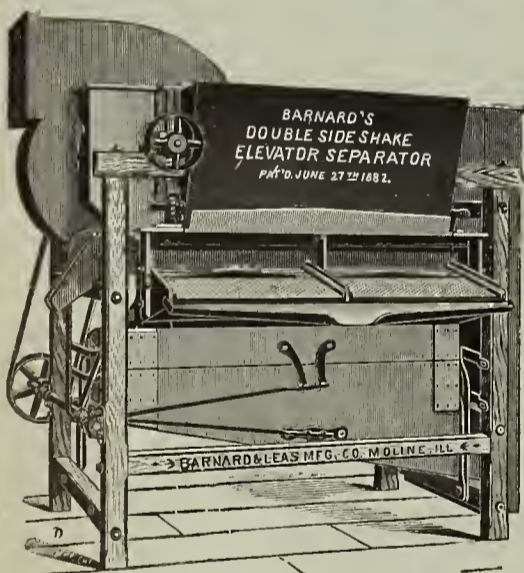
See these machines at work before purchasing.

The Barnard Grain Cleaning Machinery is built in a greater number of sizes, in a greater number of styles, and for a greater variety of uses in the mill and elevator than any other.

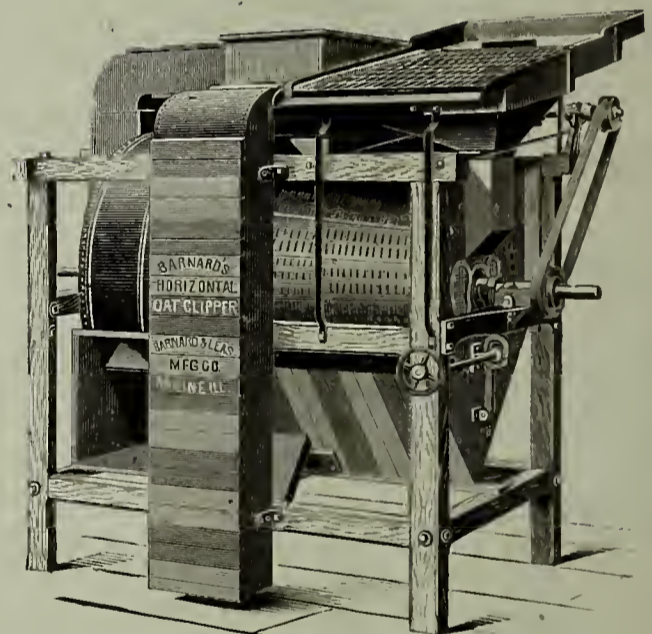
105 Barnard Cleaners were sold during the month of June for mills to be built and remodeled by us, for Elevators and Warehouses and incidental sales.



Barnard's Special Separator.



Barnard's Elevator Separator.



**Barnard's Oat Clipper
and Warehouse Scourer.**

OUR AGENTS:

M. M. SNIDER, 1325 Caritol Avenue, Des Moines, Iowa,
General Agent Iowa and Nebraska.
J. M. ALLEN, Fergus Falls, Minn.,
General Agent Minnesota, North and South Dakota.
J. F. PAYNE, Indianapolis, Ind., Room 3, Chamber of Commerce,
General Agent Ind., Eastern Ill., Western Ohio and Mich.
LEGRAND PAYNE, Indianapolis, Ind.,
Asst. Agent Ind., Eastern Ill., Western Ohio and Mich.
G. E. LEGGETT, Winchester, Ind.,
Asst. Agent Ind., Eastern Ill., Western Ohio and Mich.
STUART HARE, Enterprise, Kan.,
General Agent Kansas, Colorado and Oklahoma.
G. M. RANDALL, Enterprise, Kan.,
Asst. Agent Kansas, Colorado and Oklahoma.
F. G. WALLACE, Toledo, Ohio, 16 Produce Exchange,
General Agent Eastern Ohio and Pennsylvania.
WATEROUS ENGINE WORKS CO.,
Winnipeg, Manitoba.

R. C. STONE, Springfield, Mo.,
General Agent for the Southwestern States.
S. SIBLEY, Springfield, Mo.,
Asst. Agent for the Southwestern States.
W. H. CALDWELL, Springfield, Mo.,
Asst. Agent for the Southwestern States.
C. C. STEINMEITZ, Vienna, Mo.,
Asst. Agent for the Southwestern States.
H. R. STAGGS, Springfield, Mo.,
Asst. Agent for the Southwestern States.
W. B. TALLEY, Paducah, Ky.,
General Agent for the Southern States.
C. P. WATTERSON, Maroni, Utah,
General Agent Utah and Western States.
E. D. CAIRL, Colesburg, Iowa,
General Agent for Wisconsin.
C. E. MANOR, Stanleyton,
General Agent Virginia, W. Virginia and Maryland.

WM. R. DELL & SON, London, England.

GRAIN ELEVATOR MACHINERY AND SUPPLIES

OUR SPECIALTY

Is to Furnish Every Description of
MACHINERY OR SUPPLIES

Required for the Equipment or Repairing of

GRAIN ELEVATORS

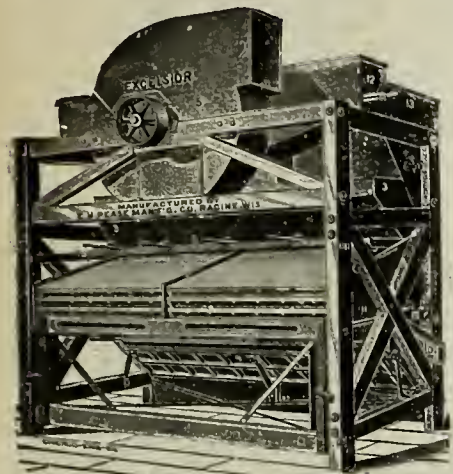
Such as:

"SWEEP" and "TREAD" HORSE POWERS,
GAS ENGINES, OIL ENGINES, STEAM ENGINES.
SHAFTING, PULLEYS, HANGERS,
PILLOW-BLOCKS, CLUTCHES, COUPLINGS,
GEARS, SPROCKETS, SET COLLARS,
LEATHER, RUBBER, COTTON AND LINK BELTING,
"FLEXIBLE" AND "SWIVEL" GRAIN SPOUTS,
ELEVATOR BOOTS, BUCKETS AND BOLTS.
"SPIRAL" AND "BELT" CONVEYORS,
"PLATFORM," "DUMP" AND "HOPPER" SCALES,
GRAIN SCOOPS, AND POWER GRAIN SHOVELS.

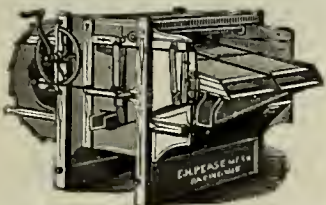
—ALL SIZES OF—

FARM AND WAREHOUSE FANNING MILLS.

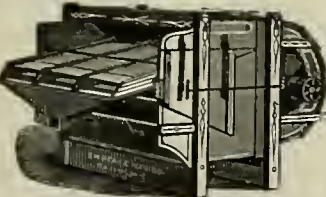
GRAIN TESTERS, SEED TESTERS,
PERFORATED METALS, WIRE CLOTH,
Power Car Pullers, Oat Clippers, Dustless
Receiving Separators,
POLISHERS, SEPARATORS, GRADERS,
FLAX REELS AND SPECIAL FLAX MILLS.
"OVERHEAD," "SWEEP" AND "TREAD" HORSE POWERS,
BAG-TRUCKS, WAREHOUSE TRUCKS, ETC.



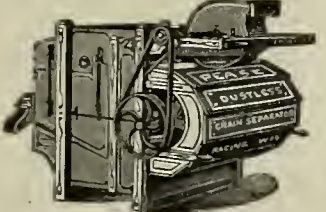
EXCELSIOR DUSTLESS ELEVATOR SEPARATOR.
Cleans, Separates and Grades Perfectly
HAS NO SUPERIOR IN THE WORLD.



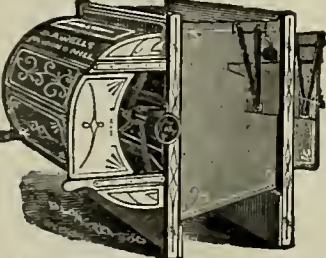
Pease Side Shake Mill for Warehouses.



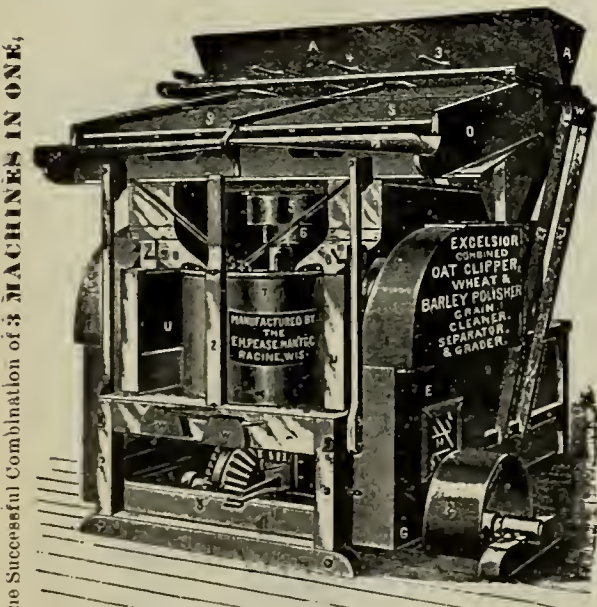
Pease End Shake Mill for Warehouses.



Pease Dustless Separator for Warehouses and Mills.

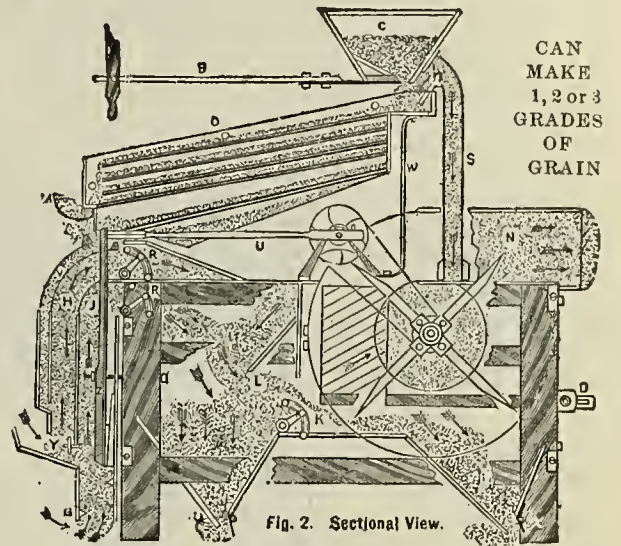


"Wells" Warehouse Mill.—Extra Large Capacity.



EXCELSIOR COMBINED
Oat Clipper, Polisher, Separator, Grader and General
Dustless Elevator Separator.

This Machine has no Legitimate Rival in the World.
Send for particulars.



CAN
MAKE
1, 2 or 3
GRADES
OF
GRAIN

Fig. 2. Sectional View.

EXCELSIOR SEPARATOR AND GRADER.

The Finest Wheat or Barley Machine on Earth



SAFEST,
MOST DURABLE
—AND—
POWERFUL PULLER
KNOWN.

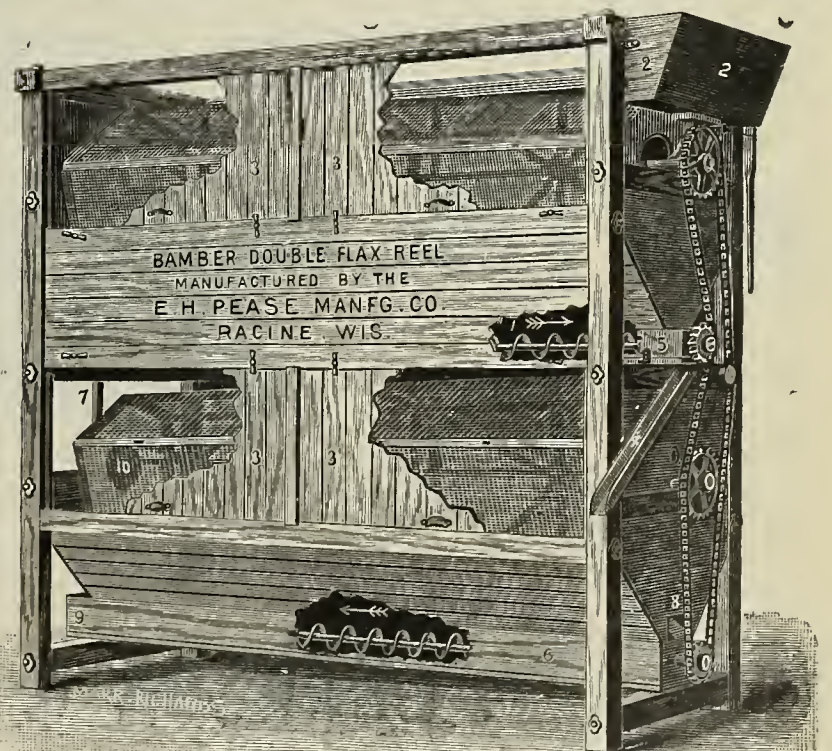
HANDLES 1 to 20
Loaded Cars at once
on STRAIGHT and
LEVEL TRACK
and pro-rata on
GRADES and
CURVES

"HERCULES" POWER CAR PULLER.

PEASE
SPECIAL
FLAX MILLS
ARE
SUPERIOR
TO ALL OTHERS.

OUR FLAX REELS

Are Adopted and in more General Use by
THE MOST EXTENSIVE FLAX HANDLERS
Throughout the United States, than any similar Machines made



Made with 1, 2 or 4 Reels in one Chest, and with or without
Scalping Shoe.

Reels of any desired style or dimensions made to order.

WE FULLY WARRANT
THE
SUPERIORITY
OF THE
MATERIALS USED,
THE CONSTRUCTION and
Operating Qualities
OF ALL OUR
MACHINERY.

ADDRESS

LETTERS CAREFULLY

—TO—

E. H. PEASE MFG. CO., RACINE, WIS., U. S. A.

FAMOUS HAND OR POWER CLEANERS FOR COUNTRY ELEVATORS.

The Successful Combination of 3 MACHINES IN ONE.

Grain Cleaners.

THE MONITOR SEPARATORS

The Most Perfect Grain Cleaner Ever Offered.

No cleaning elevator can be operated as economically without these machines as it can be with them.

- They take less power than any other.
- They are easier to place.
- They are easier to spout to.
- They require less care and attention.
- They will do better work and more of it.
- They will handle all kinds of grain.
- They are standard machines, well and thoroughly tried.

The merits of these machines are best exemplified by the fact that all of the leading cleaning elevators built in the United States and Canada during the last three years, have adopted the machines. These elevators are built on the latest and most improved plans and methods.

OVER 2,000 IN USE AND EVERY ONE A REFERENCE.

As a Barley Cleaner it Has no Equal.

If you are interested in Grain Cleaning it will pay you to investigate this machine.
Write for detailed descriptions, etc., to

HUNTLEY, CRANSON & HAMMOND, Silver Creek, N. Y.

Our Pacific Coast Agencies each carry a complete stock of machines for prompt shipments west of the Rocky Mountains

M. O'Brien, San Francisco, Cal.,
Parke & Lacey Machinery Co., Portland, Oregon, } Agents
Pacific Coast.

B. F. RYER, Special Agent and Superintendent of Sales, 799 W. Monroe St., CHICAGO, ILL.



A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

Vol. XII.

CHICAGO, ILLINOIS, NOVEMBER 15, 1893.

No. 5.

SUBSCRIPTION PRICE,
ONE DOLLAR PER ANNUM.

THE BARLEY ELEVATOR OF H. MUELLER & CO.

The grain trade, like other branches of business, is gradually becoming divided into special lines, and in many of the grain centers are merchants who handle barley exclusively. Others make a specialty of wheat, of flaxseed, of clover seed, of hay, oats or corn. Until recently, however, few elevators have been devoted exclusively to the handling of one kind of grain, now we have many elevators that are used only in the handling of one kind of grain. The exclusive wheat and barley elevators are the most numerous. Here and there is to be found a house devoted to the handling of flaxseed only, and the "Exchange" Elevator recently completed in St. Louis will handle oats exclusively.

We illustrate herewith an elevator that is used exclusively in storing, cleaning and shipping barley. It is owned and operated by a firm that deals in naught but barley. Mr. H. Mueller, who is sole proprietor of the business, started in the barley business in 1886 in company with Mr. Watkins, the style of the firm being Watkins & Mueller. The first year they handled 300,000 to 400,000 bushels. This partnership was dissolved in 1890, and Mr. Mueller formed a partnership with J. H. Pank, the style of the firm being H. Mueller & Co. The new firm bought the elevator illustrated herewith of W. J. Meek. The first season the firm handled 2,000,000 bushels of barley, and about the same amount the next year, while last season they handled 3,000,000 bushels, the business amounting to over \$1,500,000. The cars received numbered 2,974, and 2,253 were shipped. Last September Mr. Mueller bought out Mr. Pank and he is now sole proprietor of the business. He is considered one of the best barley judges on the Chicago market. A typical all-around barley man, D. H. Stuhr, represents Mr. Mueller at Cincinnati. His boundless energy and persistent push have increased his sales from a few hundred thousand bushels the first year to 1,500,000 bushels during the last crop year. The Buffalo representative is H. H. Angspurger, who thoroughly understands the business and succeeded in disposing of 900,000 bushels last year. Although the elevator is a long distance from the lake and river about fourteen cargoes of barley are annually shipped by lake.

The elevator is located beside the track of the

Pittsburg, Ft. Wayne & Chicago Railway, between Fifty-fifth and Fifty-sixth streets, in Chicago. It is in the center of a residence district. The grounds comprise about four acres of valuable land. On the west side of the house are two receiving tracks, and on the east is the shipping track. The total trackage is 2,433 feet. Well arranged switches admit of the convenient switching of cars. After the elevator was bought of Mr. Meek car sheds were built over tracks at point of loading and unloading, the interior was completely

tracks. The barley is conveyed to one of two compartments of a receiving garner, which is just inside the house on the ground floor. From this garner it is spouted to the boot of one of the main elevators and elevated to the top of cupola to one of the two 1,000-bushel scales. The beam of each scale is in a comfortable little room, which is heated by steam. The Board of Trade weighman, who has complete charge of the weighing, is kept in communication with the foreman on the ground floor by means of bells and speaking tubes. From the scale hoppers the top man sends the barley, by means of spouts and screw conveyors, to the desired bins. He can communicate with the foreman by means of an independent system of bells and tubes.

When the emergency receiving sink is used the barley is conveyed to the elevator boot by a screw conveyor that runs at an angle to the line of the house. The house contains five elevators that extend to cupola, three have an elevating capacity of 1,000 bushels an hour, and two of 4,000 bushels elevating capacity. Six other elevators extend to the top of the main working part. Of these, five have an elevating capacity of 1,000 bushels, and a screenings leg will elevate 300 bushels an hour.

On the top floor are five revolver spouts by which barley may be sent from either of the scale hoppers to one of the twenty bins in the cleaning part of the house, or to one of the 14-inch Caldwell Screw Conveyors on each side of the storage house to one of its thirty-two bins. The bins in the storage part are arranged in four rows of eight bins each, and the conveyors run right over the dividing wall. The bins of the outside rows are 40 feet deep, while the inside rows are 48

feet deep. The two conveyors in top of storage part are 100 feet long, and those in the cleaning part are 40 feet long. Underneath the storage bins are two more 14-inch conveyors 150 feet long which convey the barley from the storage bins to the elevator boots. A large repair shop, containing supplies and tools for making all kinds of repairs in wood or iron, is under the storage bins. Here are duplicate pulleys and supplies to avoid delay when a break occurs. The top man's room, like the rest of the building, is heated by steam and lighted by incandescent electric lights. It is fitted with lounging chairs, as well as a work bench and a set of carpenter's tools. Here the shovels are repaired. The house has a receiving capacity of 38,000



H. MUELLER & CO.'S ELEVATOR AT CHICAGO.

overhauled and improved. The house has a roof of tin and composition. Its storage capacity is 220,000 bushels. The working part is 113 feet high. The house is 40x205 feet. A Hercules Car Puller is used to switch cars on either side of the house. It readily switches twenty cars at a time.

Under the sheds on the receiving tracks are two receiving sinks. Every morning about thirty-five cars are put on these tracks. Each sink is between the tracks and can receive from cars on either track. Only one is used except in case of an emergency. The barley is dumped into the regular sink by Clark Power Shovels and elevated by an elevator having a capacity of 4,000 bushels an hour, which stands between the

bushels per day, and a cleaning capacity of 20,000 bushels. Two loading spouts on the east side make it possible to load two cars at once on the shipping track. A loading spout on the west side can also be called into use in case of an emergency. Every spout is shod with No. 20 galvanized iron.

Last season the elevator was operated day and night, twenty-three men being employed. So far this year only one shift of fourteen men has been employed, but the house is run every night until midnight. Recently four new Barnard & Leas Cleaners have been added so that the cleaning capacity has been increased 3,600 bushels per hour. This gives the house ten cleaners. The others being four Barnard & Leas Combined Cleaners and Brush machines of 500 bushels' capacity, one Howes Cleaner of 700 bushels' capacity, and one Printz & Rau Wheat and Cockle Machine of 1,000 bushels' capacity. By these machines the barley beards, wheat, oats and all foreign matter is removed and blown out to the nine Morse Cyclone Dust Collectors, which were recently placed on the east side of the house by The Knickerbocker Company, as is shown in the illustration. The fine chaff and dust is drawn through a large pipe under the collectors by a fan revolving 1,600 revolutions a minute and blown over the engine room to a large Cyclone Dust Collector just over the furnaces. From here the chaff and dirt is dropped into the fires or into the coal house, as the engineer desires.

About 300 bushels of dirt and chaff are burned each day, and the amount of coal used has been reduced 33 per cent. Last season this dirt was collected in a dust house and hauled away at an expense of over \$10 per car. That is, part of the dust was collected and part of it settled in the yards and houses of the neighbors. Since the dust collectors were put in no complaints have been made of dust from the elevator.

Every effort is made to utilize all that is of value in that which is usually considered waste matter, and Mr. E. C. Butz, Mr. Mueller's right hand man, who looks after many of the details of the business is now building a machine to make three separations of stuff that is usually sold for feed. An effective device has been arranged to prevent good grain being carried to the furnace fires. A section of the pipe near the fan is made larger than adjoining sections, and the bottom of this section, which is several inches below the bottom of the adjoining sections, is inclined towards the fan. All grain is dragged along the bottom of the pipe on its way to the fan, and when it comes to the section with a depressed bottom it drops down and rolls through a 4-inch opening in the lowest part of its bottom and into an air-tight chamber below, from which it is removed and utilized. The draft is kept strong enough to draw the dirt and chaff over the depressed bottom and into the fan.

On the main floor of the elevator, beside receiving bin, is a stock slate which shows the grade of grain in each bin. Also on this floor is a grading box where grain from the different bins is graded and the quality made uniform. This is supplied only from bins containing clean grain. The hangers, shafting and supplies were furnished by the Webster Manufacturing Company.

Every precaution is taken to prevent the spreading of fire, and in many places about the house are fire hand-grenades and barrels with buckets hung near by. A 4-inch standpipe has hose attached on each floor. It is supplied by a steam pump with a capacity of 100 gallons a minute.

The power equipment consists of two boilers 54 inches by 16 feet of 65-horse power, and a 175-horse power Hamilton-Corliss Engine. An automatic damper regulates in a degree the fire. An automatic steam pump supplies the feed water heater as well as

the standpipe. Power is transmitted from the fly-wheel to a 6-inch jack shaft 8 feet long. The main drive, which is a 20-inch, 6-ply rubber belt, transmits the power from this shaft to the countershaft in cupola. The two 60-inch head pulleys on the two large elevators are propelled by a friction drive.

The 75-light electric plant consists of a 40 ampere dynamo run by a special 8-horse power engine. The brick chimney is protected by a 28-strand copper rod. The engineer's quarters is equipped with a forge and all kinds of tools and supplies to make quickly any needed repairs.

Just back of the engine room is the brick office divided into three compartments. It contains the billing clerks' quarters, the supply house, where a full supply of electric lighting apparatus is kept, so that any changes, additions or improvements can be made as desired. It also contains the sample department of foreman R. G. Stuhr. Here are samples of the firm's standard grades, which correspond with samples at the main office in heart of city, and samples in customers' hands.

The entire plant is heated by steam and is equipped with every device and convenience for facilitating the

DETERMINING THE VALUE OF BARLEY.

The barley trade of several markets where inspection is compulsory pays for an inspection that is of no use to it, for no attention is paid to the grading made by the inspectors. The grading of flaxseed has been made an exact science by Inspector Stevens, but the grading of barley remains as it has been always, very uncertain and unreliable. In the Chicago market the gradings of the inspection department are seldom quoted by the barley experts. The rules governing the inspection of barley in Illinois are as follows:

No. 1 barley shall be sound, plump, bright, clean and free from other grain.

No. 2 barley shall be of healthy color, not sound and not plump enough for No. 1, reasonably clean and reasonably free from other grain.

No. 3 barley shall include slightly shrunken and otherwise slightly damaged barley not good enough for No. 2.

No. 4 barley shall include all barley fit for malting purposes not good enough for No. 3.

No. 5 barley shall include all barley which is badly damaged, or from any cause unfit for malting purposes; except that barley which has been chemically treated shall not be graded at all.

The grades of Nos. 1, 2 and 3 Scotch barley shall correspond in all respects with the grades of Nos. 1, 2 and 3 barley; except that they shall be of the Scotch variety.

The grades of Nos. 1, 2 and 3 Bay Brewing barley shall conform in all respects to the grades of Nos. 1, 2 and 3 barley; except that they shall be of the Bay Brewing variety grown in the territories and on the Pacific Coast.

The grades of Nos. 1, 2 and 3 Chevalier barley shall conform in all respects to the grades of Nos. 1, 2 and 3 barley; except that they shall be of the Chevalier variety grown in the territories and on the Pacific Coast.

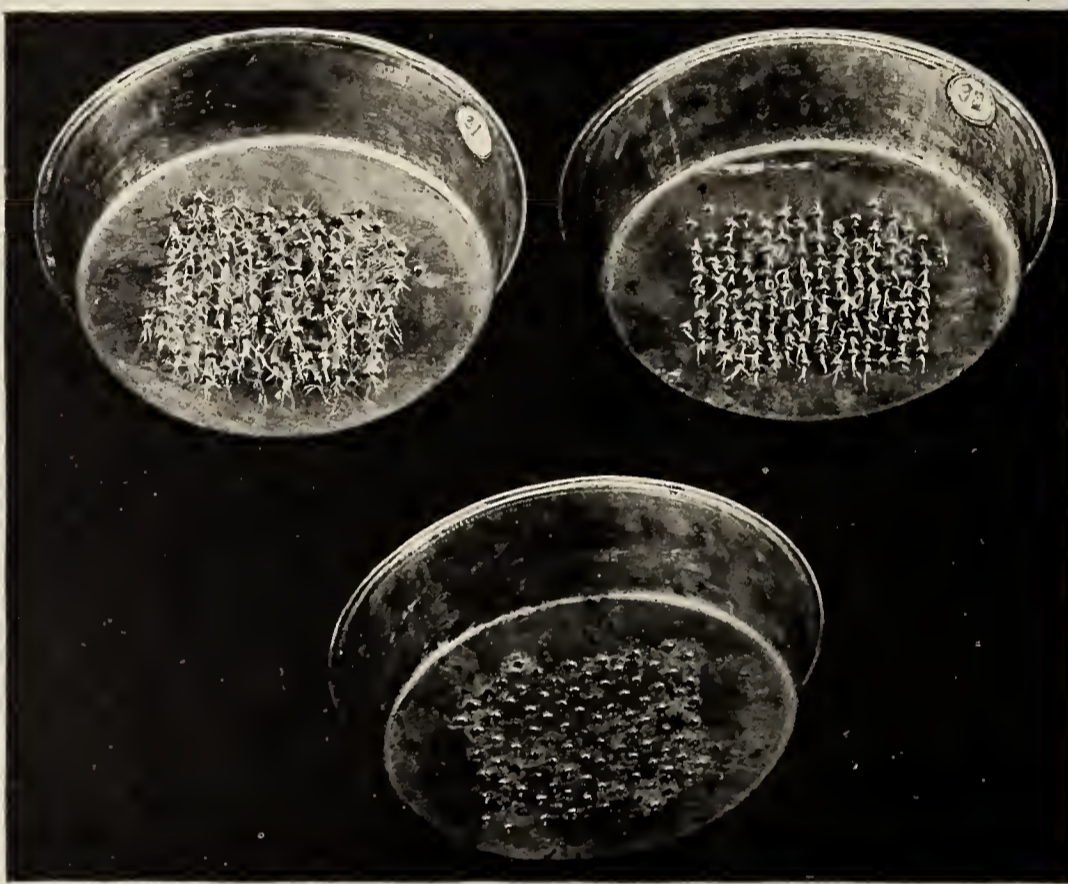
The word "new" shall be inserted in each certificate of inspection of a newly harvested crop of barley, until the first day of May.

The firm of H. Mueller & Co.

which is one of the leading firms on the Chicago market dealing in barley, do their own grading according to their own standards of quality. Samples of each standard grade are kept in boxes at the office, elevator and established agencies. These samples of standards are frequently renewed, so that the measure of quality will remain the same. Most of the barley is bought by sample on 'Change. Fresh samples of the barley taken by the official inspector are then compared with the sample bought and with the standards by Mr. E. C. Butz, who grades each according as in his judgment they correspond with the firm's samples. Mr. Mueller afterward does likewise, and the grading of the two is then compared. They very seldom disagree in their gradings. If sample agrees with purchase sample the barley is accepted at the contract price. The barley is again sampled and graded when the car arrives at the elevator.

The points considered by this firm in grading barley are all of those supposed to be used by the state inspection department and also others. In determining the value of barley the comparison with the standard samples and the close examination by experts as to color, weight, plumpness and foreign matter is assisted in some cases by a grain tester, a small cleaner made by the Barnard & Leas Manufacturing Company especially for office use, and also by an ingenious home-made germination apparatus.

This germination apparatus consists of two tin pans about three inches deep, with tapering sides, so that one can be set tightly in the other. The top pan



A HOME MADE BARLEY GERMINATOR.

rapid and effective handling of barley. Barley is bought on track and by sample in all parts of the Mississippi Valley barley growing region. Mr. Mueller has several houses at Iowa points in charge of his agents. W. H. Lunt buys at Rock Rapids and Lunt Siding, Alvord and Doan and Kuhl & Wiese operate a cleaning elevator at Eldridge.

KANSAS CITY HAY DEALERS.

The Hay Dealers' Association of Kansas City, Mo., of which C. S. Greischar is secretary, held its regular meeting October 19. A number of interesting topics was discussed. In order to increase the membership of the association the membership fee was reduced from \$10 to \$5. The constitution was also changed, dispensing with the directors' meeting on the first and third Thursday of each month, and providing that all future meetings will be open to all the members, and subject to the call of the secretary. These changes were made in order to induce other dealers to join and take an active part in the association, and make it active and beneficial for all. The association has already done great good for the promulgation of the hay trade, and if all dealers join and take an active interest still greater benefits will be experienced by its members.

L. Cortelyou, Muscotah, Kan.: "The longer I take the AMERICAN ELEVATOR AND GRAIN TRADE the more I appreciate it."

has 100 small holes punched in its bottom. Whenever it is desired to determine what percentage of a sample will grow 100 grains are placed in these holes, the germ end of each grain being pushed through the hole. The pan is then partially filled with sand and water poured upon it. A cover which tightly fits in the pan is then placed upon the sand to retain the moisture. This cover is a round, thin board with a cross piece to strengthen it and to serve as a handle. To make it fit tightly the edges are covered with wadding. A little water is put in the under pan and the pan containing the barley is set into it, so that its bottom is about two inches above bottom of under pan. It is then placed on a shelf to await developments. Attached to each pan is a slip of paper bearing the number of the sample, and the hour and day it was placed in the germinating apparatus.

The illustration given herewith shows three of the top pans, which were set at different times. The lower pan in cut which shows very little growth was set November 6 at 5:30 p. m. Pan 32 in upper right hand corner of cut was set November 4 at 5:00 p. m. Pan 31 in upper left hand corner of cut was set November 3 at 9:00 a. m. The photograph of each was taken November 7, at 4:00 p. m.

Of the barley set in pan 32 only two grains failed to grow, showing that 98 per cent. of the sample would germinate. The roots are all bright and clean and of about uniform growth, showing a healthy condition. Twenty grains in pan 31 failed to sprout, showing that only 80 per cent. of the barley would germinate. The roots of the grains that did grow were not uniform. Some were stunted and some were covered with a fungus like mildew, showing an unhealthy condition.

When barley is so thoroughly tested by experts who handle no other grain, it is not to be doubted that their grading is more reliable than that of inspectors who grade all kinds of grain, and that the experts come nearer to determining the real value of each sample. If the inspection departments at the different grain centers would employ a barley expert to examine and test samples and supervise the work of the track inspectors, the barley grading of the departments might be of more value to the barley trade.

THE EUROPEAN FLAX HARVEST.

"Advices from Russia go to show that this year's flax crop will be larger and of better quality than that of last year," says the *Pull Mall Gazette*. "In the St. Petersburg district a shortage of about one-third is expected, owing to the continuance of wet weather. Reports from Riga, however, point to an abundant crop of good quality, and practically the same intelligence comes from Reval, Pskow and Stettin. The sowings this year in Moravia, Bohemia and Silesia have been considerably in excess of last year, but in all three districts unfavorable weather has had the effect of interfering with the growth and with the quality of the growth. In France and Belgium the yield of the straw is said to be only 18 per cent. after steeping, as compared with an average for past seasons of 25 per cent. In Holland the dry weather is responsible, according to Messrs. Soutar, McNicoll & Co.'s advices, for the fact that the bulk of the yield has come up very thin and irregular, more especially in the southern districts, and it is expected that the net result will be from 30 to 40 per cent. under the average of the decade. In Ireland, as we prophesied some time ago, there has been a decrease in the acreage from 70,642 to 67,444, but the yield is of high quality, judging from those lots that have already been put on the local markets. On the whole the European flax harvest bids fair to fall considerably short of last year's total, notwithstanding the increase of acreage and yield in Russia."

NEW ELEVATOR AT ST. LOUIS.

A business event that speaks loudly for the stability and progress of St. Louis during a period of great financial depression is the erection of a grain elevator of large capacity to meet the increasing demands of business.

The new elevator is located on the Levee at the foot of Chouteau avenue, and in its construction absorbed the old Elevator "B," owned by the United Elevator Company. These added facilities indicate that St. Louis will continue to progress as a grain market and that she has abundant enterprise and financial strength to keep abreast of the demand.

Central Elevator "B" was built in a remarkably short period, there having been but fifty-two working days consumed in its construction from the time the foundation was ready for the superstructure. The contractors were the Metcalf-Macdonald Company of Chicago, whose specialty is the building of elevators. In the language of Mr. Samuel this concern "not only carried out the contract to the letter, but also in spirit and to the entire satisfaction of the United Elevator Company."

The new elevator was located and designed especially for the accommodation of Missouri Pacific and Frisco Railroad business, and its location also makes it convenient for barge and steamboat traffic. The

The usefulness of the garner comes in taking care of the continuous streams of grain while the hoppers are performing their intermittent functions. Each elevator is fitted at the head with branch spouts by which it is made to reach two garner, and into either of these the course of the grain may be diverted at the will of the weighmaster.

The receiving sinks are set in heavy steel water-tight tanks, twelve feet below the track level, forming large reservoirs into which cars may be emptied at a very rapid rate. The grain is taken from here and carried to the extreme top of the cupola, and the grain is then discharged through spouts into the garner. The mechanism for imparting motion to the elevator legs is located at the top of the elevators and can be operated at will from the ground floor.

A superior power plant, located on the west side of the main structure and fronting on Chouteau avenue, consists of a high speed engine, developing 325-horse power. A battery of boilers is located at the rear of the engine room and is connected with a massive brick chimney, 165 feet high and 15 feet in diameter at the base. The power is distributed from the main shaft by means of manilla rope, the use of which is comparatively new in St. Louis. The rope is one and one-fourth inches in diameter and is lapped fifteen times around the huge sheave on the engine shaft. An ingenious device is employed by which one loop of

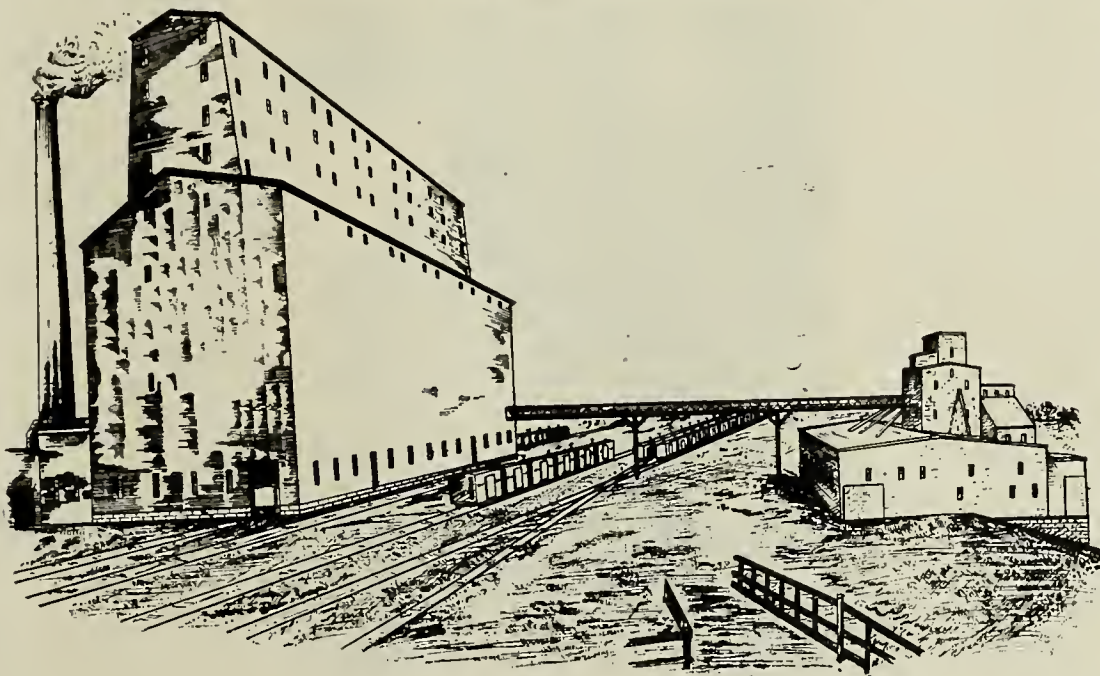
the rope is picked out from the several loops and stretched to give the rope the proper tension. The same means of transmission is employed for all parts of the structure. Long ropes pass up through the bins to the top of the cupola, driving all the machinery therein. From the main line shafts on the first floor the car pullers and power shovels are operated by rope drives.

The operation of handling the grain from the time it leaves the cars until it is put in store, or placed in boats or cars for shipment, is performed entirely by automatic machines, especially designed for the purpose. Two men in a car of grain will unload the same by means of automatic shovels in fifteen minutes' time. If the weighmaster desires to unload 1,200 bushels of grain from the scale directly into a

car it is done through specially arranged spouts, which deliver the product through the door to each end of the car, filling it completely without the necessity of shoveling, in from three to five minutes' time. When it is desired to draw any grain for re-shipment it is done by means of spouting to the foot of the elevators. All valves and openings for controlling the valves are governed by a man standing on the first floor.

The exterior is covered with corrugated steel plates, while on the cupola and roof is specially prepared tin, coated with red mineral paint. The Metcalf-Macdonald Company received the contract on May 23 to erect the structure, and it was to be completed by October 1. The contractors delivered their goods just eight days ahead of time. Not only the main structure, but also the placing of the machinery, building the stack, furnishing boilers, etc., were included in the contract. Everything was turned over to the United Elevator Company in working order in this remarkably short time. The machinery was supplied by the Webster Manufacturing Company of Chicago.

The gross capacity of Elevator "B" is 1,250,000 bushels, which is greater than any other elevator in St. Louis. The handling capacity is 48,000 bushels an hour or 150 cars a day. The United Elevator Company, by the new acquisition that cost \$150,000, has twelve elevators, with a total capacity of 8,000,000 bushels, the smallest having a capacity of 500,000 bushels. The only other elevator at this port that is not owned by the United Company has but a half-million bushels' capacity. The United Company's managers have labored to locate their elevators to unite the convenience of various railroad and steam-



CENTRAL ELEVATOR "B" AT ST. LOUIS.

entire structure covers ground measuring 170x98 feet. Excavations 10 feet deep were first made and then 1,800 piles were driven in clusters of 15 to a depth of 25 to 35 feet. Each pile can sustain a weight of 27 tons. After the piles were cut level they were capped with 12 inches of Southern pine and then about seven feet of masonry was added to bring the foundation to the railroad track grade. It was at this stage of the construction that the contractors began to erect the superstructure, upon July 24.

Heavy columns of Georgia pine, each capable of sustaining a strain of 400 tons, were set on the masonry, and were then joined at the top with heavy pine girders running lengthwise and crosswise. It is upon this solid structure that the cribwork of the bins rests. The bins number 162 and are each from 2,000 to 7,000 bushels in capacity, while the greatest depth of any bin is 70 feet. The walls of these bins are of planking, heavily spiked, and are from four to ten inches thick, according to location. The bottoms are all of conical shape, so as to be self-cleaning. The all-important bin story is surmounted by a cupola five stories high, containing the elevating, weighing and distributing machinery. The first floor of this upper section is filled with improved iron spouts, by which grain may be distributed to any one of the bins for storage. These spouts lead from eight large weighing hoppers, each of 1,200 bushels' capacity, on the third floor. Above these hoppers are eight large garner which receive the grain directly from the elevator machinery in the fifth story. These garner are so arranged as to take care of the continuous streams of grain delivered by the elevators at the rate of 6,000 bushels per hour. The operation of weighing is an intermittent one, the hoppers being filled and then emptied.

boat lines. The new structure fills a big gap that has seriously needed supplying.

The officers of the United Company are very capable and progressive business men, and, besides President Samuel, they are as follows: Vice-president, Hugh Rogers; secretary and treasurer, B. L. Slaek; assistant secretary, C. A. Cunningham. The company is pleasantly located in a suite of five rooms at the Rialto Building.

AMERICAN DOMESTIC WATER COMMERCE.

Among the addresses delivered before the World's Water Commerce Congress at Chicago recently one of the most interesting was that of Mr. Thomas J. Vivian, dealing with the status and extent of American domestic water commerce. In this address Mr. Vivian essayed to show that while our foreign carrying trade has undoubtedly diminished, the increase in our domestic carrying trade has been largely compensatory; that this domestic commerce has developed during the last few years into an industry of extraordinary extent; that the entire carrying fleet of the country is larger than that of Great Britain, and that the area of our domestic commerce is so vast that the distances made in average trips on inland waters cover many of the distances made in England's foreign voyages. Attention has before been drawn to the comparative magnitude of our domestic water commerce, but in the address of Mr. Vivian the subject is presented in the light of more recent statistics than we have seen elsewhere collected.

At the outset it is frankly admitted that what is generally called our carrying trade is neither what it was nor what it should be. In the course of thirty years, from 1856 to 1886, the proportion of our total imports and exports carried in American vessels fell from 75 to 15 per cent., or from about three-quarters to something under one-sixth of the whole. By the census year 1890 the percentage had declined still further to a little over 12 per cent. On the other hand, it appears that during the thirty years ending in 1890 our records show that we built 1,747 ships and barks, 575 barges, 12,423 schooners, and 17,359 sloops and other small craft—a total of 32,104 sailing and unrigged craft, representing 5,159,605 tons of tonnage, together with 10,652 steamers having a total tonnage of 2,864,066 tons—a grand aggregate of 42,756 craft of all kinds, having a tonnage of 8,023,671 tons, or an average annual addition of 1,379 vessels, of 258,828 tonnage tons, to our fleet. This, the writer says, is not so bad for a nation with a dead carrying trade.

The United States fleet in the census year numbered 8,917 sailing vessels of 1,791,971 tons, and 6,067 steam vessels of 1,818,386 tons, a total of 14,984 vessels of 3,615,457 tons. These figures, however, do not, in the writer's view, represent the water transportation equipment of the United States. To the vessels already enumerated must be added an unrigged fleet numbering 10,561 vessels, with a carrying capacity of 4,008,847 tons, which would bring the aggregate up to 25,545 vessels, with a tonnage of 7,624,304 tons. The aggregate value of this fleet is estimated at \$215,020,336, and if to these figures be added \$25,000,000 for shore property, we have a total of something over \$240,000,000. The persons employed to make up the ordinary crews of all operating vessels numbered 109,861, and those employed wholly or partially during the year numbered 240,288. The wages paid out to these persons amounted to \$39,684,936. The gross earnings of everything afloat and reporting amounted to \$144,800,954, out of which were paid \$114,531,690 as expenses, leaving \$30,269,264 as net earnings, which represents a return of 11 per cent. on an estimated capital investment of \$275,000,000, or of 17 per cent. on the valuation of \$240,000,000 for floating property and shore attachments.

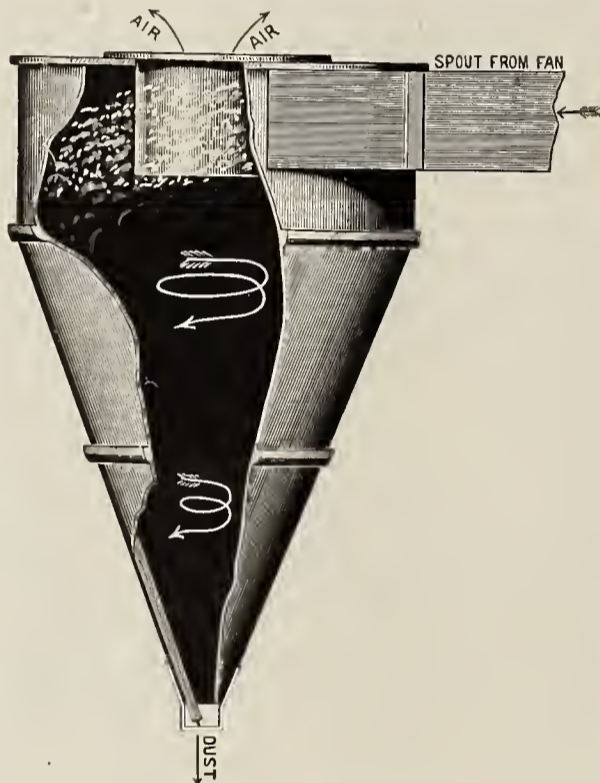
The freight movement of the domestic commerce of the United States includes the following items, according to Mr. Vivian, viz.: That of the great lakes 53,424,432 tons; that of the rivers of the Mississippi valley, 29,405,046 tons; that of the Atlantic coast, 72,705,973 tons; that of the Pacific, 8,111,278 tons, making a total of 163,646,729 tons, to which, if we add canal traffic of 20,747,932 tons, we have an aggregate of 184,394,661 tons. In marked contrast with these fig-

ures is the statement that our foreign commerce in the census year, that is, freight brought into and carried from United States ports on United States vessels flying the United States flag, amounted to only 4,431,591 tons.

THE CYCLONE DUST COLLECTOR.

The cut given herewith shows the Morse Cyclone Dust Collector, manufactured by the Kniekerboeker Company, Jackson, Mich. This machine was first put upon the market by that company in 1886, and they are now used wherever dust collectors are needed. They have almost superseded the crude forms of dust collectors which flooded the market before their introduction. As will be seen by the cut, there are no working parts to the machine, and all that is necessary is to attach it to the fan of the cleaner or other dust-producing machine by a suitable spout.

The dust collector is composed of a separating chamber having an imperforate peripheral wall in which the whirling body of air forms a vortex, and in which the air moves from the periphery toward the axis of the vortex as it becomes freed from the solid matter; said chamber having at its large end a tangential inlet for the dust-laden air, and a discharge



THE CYCLONE DUST COLLECTOR.

aperture for the purified air opening into the atmosphere, and provided with a tubular guard projecting into the separating chamber, and at its small end a discharge opening for the separated dust. There are more of these machines in use than all others combined, having been introduced and used in every country where flour is made. They are especially adapted for use in elevators, and almost all of the elevators in the Northwest are supplied with them. There are also a large number in the elevators of Chicago and its vicinity, a full line of them being in the Mueller Elevator, mentioned and described in another part of this number.

Charles Davies, a farmer living near Whitewood, Assa. Ter., brought to that place recently wheat which weighed 68 pounds to the bushel. The wheat was of the white Fyfe variety, large and of a beautiful color. It was grown on breaking (not back setting), was sown May 10 and harvested August 24 and 25. Mr. Davies raised 1,800 bushels of the wheat. One sack was weighed before witnesses October 19 and tested 68½ pounds to the bushel.

There were 282 ears of wheat inspected at Winnipeg, Man., during the week ending October 21, against 377 ears for the same week last year. During the week ending October 14 236 cars were inspected, against 481 cars inspected during the same week last year. During the week ending October 7 280 cars were inspected, compared with 399 cars for the same week last year. There were 210 ears inspected during the week ending September 30, compared with 304 cars inspected during the same week of last year.

SOME POINTS ABOUT TRACK SCALES.

BY OBSERVER.

Much has been written lately, pro and con, on the subject of track scales for grain weighing at shipping points. Their use is objected to by some on account of their alleged unreliability, while others are crying aloud for them and are quite willing to abide by their weights if only the railroad companies will furnish the scales. From observations and long experience with track scales, I am constrained to think that they are more sinned against than sinning. A good hopper scale will weigh accurately if it is in order—if it is operated with care; and if it is properly constructed it will remain in good order if reasonable care is taken of it. And this is exactly the case with a track scale.

Many scale owners, and especially railroad employees who have charge of the yard scales, have no conception of what constitutes proper care. A track scale beam which has been sent to a repair shop and which came under my observation, had, according to the proud declaration of the owner, done service constantly in an elevator for ten years. I had personal knowledge of the fact that the owner was having trouble continually about his weights; yet in the ten years he had used his scale he had not thought it worth while to have it examined by an expert. Possibly he had not tested it in that time. Upon examination of the beam I discovered that the notches into which the dog of the sliding poise is supposed to fit closely, were nearly half filled with dust and smut. Now when we stop to think that the distance from one notch to another measures off five hundred, and on many scales one thousand pounds, and that the distance from the bottom of one notch to the bottom of another is but from three-eighths to one-half inch, we begin to realize, or ought to, that it is a matter of some importance that the sharp edge of the dog fits closely into the notches. If the notches are half filled with smut, or if by reason of "rapid work in weighing" which we sometimes read about, the operation fails to firmly fix the edge of the dog into the notch, the result in track scale weighing is apt to figure as a factor on the "con" side of the track scale question when the much-abused scale is entirely innocent of wrong-doing.

Another reason why track scale weights are unreliable is the fact that usually not enough time is taken to balance the beam. If the beam vibrates to a distance of one-half inch above or below the balancing point the load is often considered weighed, when an exact balance may make a difference of twenty to forty pounds. On short beam hopper scales, where the weight is obtained mainly from the counterpoise and the whole length of the beam has a capacity of from five hundred to two thousand pounds, the obtaining of an exact balance of the beam is not, relatively, of so much importance. The track scale has its capacity mainly on the beam, while the hopper scale has its capacity mainly on the counterpoise. If the loose weights balance with the load within one thousand pounds, and an amount less than one thousand pounds is to be found on the beam, it is certainly not as important to have a close balance because the beam is affected by an infinitely less weight than is the case on a track scale. From my observation I do not consider that on a track scale a ear of wheat is weighed unless the poise is accurately set and the beam balances, and stands at a balance long enough to make it certain that it is an exact balance. Of course this sort of doctrine would be pooh-poohed by many "experienced weighmen," and especially by the very rapid men who weigh a whole train of cars without having a single ear stopped on the scale.

Not long since I happened into a railroad yard where the railroad employees were weighing a train of building stone. If it had been wheat or silver bullion I presume the operation would have been quite as rapid. It was done in this fashion: While the ear is passing over the scale the weighman clutches the poise and yanks it back and forth over the beam until the beam shows an indication of balancing, and the ear is weighed! If the car is a long one its full length does not leave but a foot or two of track over which to move while the operator is weighing it. In this case the operator was an expert, and had a reputation

among the trainmen for rapid work. And he certainly worked lively. After the car was weighed (?) and while it was passing off the scale he recorded the car number while he was "waiting" for the next car to get its full length (perchance) on the scale. He explained that he very seldom used the auxiliary beam (500 pounds).

A natural inference from my observation was that every big stone in the train load had been cut from the quarry of such size and weight that one by itself, or grouped with any number of others on a car, the single or combined weight always came close to even thousands. That is, if the car did not weigh 45,000 it would certainly weigh either 44,000 or 46,000. It was in my mind to suggest that he estimate the weight of the first stone on each car and multiply that sum by the number of stones thereon, which would give the total weight. I didn't suggest it, however. And I'm glad I didn't.

This rapid weighmaster pointed with pride to the fact that his weights "had not been corrected back on him" but twice or thrice during the season. And I have no doubt the statement was true. Why not? If the man who did the weighing at destination was as rapid as our hero, it isn't likely that any corrections would be made.

Fact is, this weighman was using the main beam of his track scale as a piece of mechanism to enable him to make a fair estimate of the weight of the car. That was all. I asked him if he weighed grain in the same way. He didn't say he wouldn't if it was necessary, but replied that grain wasn't shipped in train lots from his station. In fact, none whatever was shipped, but considerable was received for the mill. But this was received by the carload and was therefore weighed closer than he weighed stone. For which I gave him credit, but I doubt if he was capable of being very careful, by reason of his propensity for rapid work.

Apropos of rapid work, I read not many months ago of a wonderful feat in rapid loading of a vessel at one of the Duluth elevators—which feat implied rapid weighing of course. In the next number of this same journal I read of a shortage of 500 bushels in the cargo of schooner ———, loaded at Duluth and unloaded at Buffalo. Were the perfected hopper scales used in loading this vessel unreliable? In the elevator with which I was connected we used track scales exclusively for weighing in. Three times each week, and in busy times oftener, we weighed one of the heavier loaded cars on each one of the four track scales in succession, and a regular report of the weights was made and kept on file for reference. The differences in weights were seldom greater than 20 pounds—two or three of the scales giving exactly the same weight each time. The variation, when it did occur, was due doubtless to the fact that the beam was not perfectly balanced before the load was weighed. Taken together, month after month, the variations were not considerable, and, on the whole, our track scale weights were satisfactory. This one point should be thoroughly understood—that a long beam works slower than a short one and that more time should be taken, relatively, to effect a balance.

There is something radically wrong with the notion that the operation of weighing should be done in a hurry. This hurrying is a hundred times oftener the cause of incorrect weights than unreliable scales. Time should be made in some other way. Every elevator may be supplied with absolutely correct scales and still the shortage trouble will exist so long as there does not exist a more general sense of a necessity of careful weighing and careful recording.

No scale should be trusted without being often tested. It seems to me it would be practical as well as effectual when track scales are put in at shipping points for grain weighing, to have a hand-car loaded as heavily as possible with sand or stone and thoroughly housed near the scale in such a way that it could conveniently be run onto the scale. The weight of the hand-car should be stenciled upon it by the scale tester; and if it be kept safely locked in a little house which should protect it from the influences of the weather and prevent any weight being added to or taken from it, it should weigh exactly the same at every test of the scale. The heavier the car can be made, the better the test.

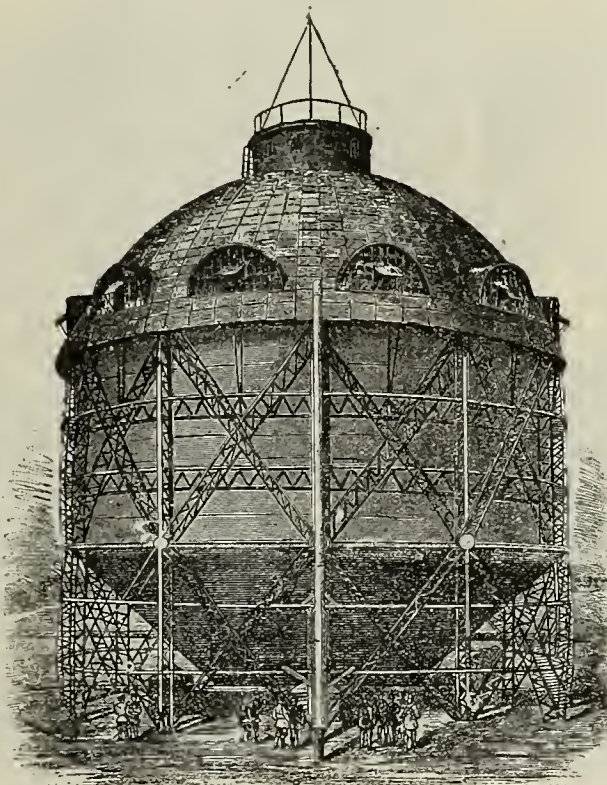
A track scale for country weighing is, it seems to

me, much more desirable than hopper scales; because the hopper scale can be used for grain only, while a track scale can be used for shipments of any description.

A GREAT GRAIN ELEVATOR AT WARSAW.

In the *Müller Zeitung* of Vienna we find a cut of a novelty in the way of elevator building, which we reproduce on this page, and from its article we extract the following facts relative thereto. The extraordinary scale upon which it is evident European warfare will be conducted has emphasized the problem of feeding the masses of soldiers and rendered it necessary in time of peace to make suitable preparation therefor. Not only must preparation be made for the support of troops in offensive and defensive warfare, but for the population of those centers whose strategic importance has caused them to be fortified.

Warsaw has already been surrounded by a double girdle of detached forts, and is a fortress or rather a fortified camp of the first importance in the event of war. The city of Warsaw has a population of half a million, and to feed these and the garrison in case of defensive warfare has been one of the things that



A GREAT GRAIN ELEVATOR AT WARSAW.

have been provided for. For this purpose ten granaries have been erected with a capacity of 600,000 bushels. The manual labor necessary to handle and turn over this large quantity of grain was so large that General Starynkiewicz conceived the purpose of accomplishing all the manipulation through mechanical appliances. The result was the building figured herewith. Its apparatus is intended not only for the separation and grading of grain, but particularly for the turning over and airing of grain. Its capacity is about 120,000 bushels, and it can handle 1,200 bushels per hour, so that it can handle its entire capacity in a hundred hours.

The elevator is entirely built of iron. The lower and upper part, which last carries a cupola, are conical in shape, while the middle portion of the structure is cylindrical as is also the foundation, which is constructed of concrete. The essential working parts are in an iron pipe or tube running up through the center of the structure. The grain is dropped into an underground gallery and conveyed to the elevator leg whence it is raised to the top of the building. Then by means of a ventilating fan it is blown and cooled and by means of a sieve is distributed through the upper and middle parts of the structure. Thence through twelve iron discharge spouts it is sent back to the receiving bins of the elevator, or can be discharged out of the structure. Both within and without the elevator are stairs through which one can ascend to the top of the cupola and inspect the grain. The total height is almost 80 feet. For power purposes and for electric

lighting there is at the bottom of the lower conical section a 12-horse power gas motor. Two tracks lead to the discharge spout and the receiving bins by which the grain may be taken away or sent back to the granaries mentioned above. The cost of the structure was about 80,000 rubles.

CROP REPORTS UNRELIABLE.

We have more than once of late shown the fallacy of relying upon crop reports, based, as they invariably are, upon statistics gathered from producers, and, as farmers naturally imagine their interests are best served by underestimating rather than giving an exact statement of their crops, they furnish estimates that are below the true production. This is eminently a characteristic feature in the compilation of wheat crops; and in furnishing figures for the wheat yield of 1893, farmers had greater reasons than ever before for estimating their production as low as possible, in the hope that it would have the desired effect of lifting values out of the low rut into which they had fallen. This deception, arising from miscalculation, has been going on for the past three years at a rate never before experienced, until the supplies of wheat in different countries, as represented in statistical tables, have rightly been regarded as absolutely valueless as pointers for the regulation of values. We make bold the assertion that the miscalculation and deception have been going on to such an extent during the past three years that we do not know how we stand as regards actual supplies in reserve, which do not figure in visible stocks.

A New York authority on wheat says: "It is well known that the crops in other countries promise to be very much larger than they were in the great year of failure, the only year in which this country exported over 200,000,000 bushels. It is also known, whatever it may be, it is not so small that any material advance in the price has been sustained. It is equally well known that something like 100 million bushels has been brought over, which would make a supply for the year ranging from 475 to 550 million bushels. As the quantity required for consumption in this country at the ordinary rate is about 365 million bushels, it is easy to see that an export demand as large as has ever been known in ordinary years can be met. But if prices should be materially higher, that of itself would tend to limit the European consumption, in a year when home supplies in most countries of Europe are comparatively short."

It is believed by not a few that the reserves of wheat in farmers' hands in the United States held over from previous years are much more than 100,000,000 bushels.—*Trade Bulletin*.

FOREIGN MARKET FOR FLAX FIBER.

Germany imported in 1892 from all countries 60,691 tons of raw flax fiber which was spun into yarns by 13 large spinneries located in various parts of the empire. Of this large import 55,459 tons—about eleven-twelfths of the entire amount—came from Russia, which alone exports largely to England and Belgium. Russian statesmen know that the flaxspinners of Germany are dependent on Russia for the great bulk of their raw material, and since Germany admits this material free, there is a prospect that Russia, in order to increase her own revenues and incidentally to make Germany feel the full weight of the present disagreement, will soon put an export duty on raw flax sold to this country, which, if it be imposed, the German consumers of that staple will naturally have to pay. But whether this anticipated export tax be imposed or not, the German spinners do not wish to be dependent on Russia, and the present report is intended to embody their inquiry as to the practicability of finding a new source of supply in the United States.

It is known that in our country vast areas of flax are grown for the seed, the fibrous stalk being thrown away and rotted for manure. The question is whether the flaxseed growers of the United States, when they know that a new and important market for flax fiber stands open and ready in Germany, will take the trouble to save and prepare it for export.

A NEW YORK GRAIN DRYING PLANT.

The growth of the trade in brewers' grain has naturally been followed by the erection of new grain drying plants, and the invention of new machines for the drying of grain. One of the plants recently constructed for drying brewers' grains is that illustrated herewith, which is owned and operated by the Farmers' Feed Company of New York City, a company which deals extensively in brewers' grain.

The new plant is located at Seventy-fifth and Seventy-sixth streets, near the East River.

The site occupied is 100x204 feet, but above the lower story the building is T shaped, the shaft of the T representing the main structure, the cross forming the Seventy-sixth street front. Extending from end to end of the main building on the ground floor is a driveway, flanked for its entire length by a platform onto which the wet grains are unloaded. On the further side of this platform are the hoppers, connected with the drying machines, of which there are at present 20 in operation on the ground floor story on the west side of the building, each connected with a separate stack by which the vapors of evaporation are discharged above the roof.

The drying machines used are of the Adolphus Buseh (St. Louis) pattern, and are the same as used with marked success by the St. Louis Dried Grains Company of that city.

In this machine the grains may be dried with or without pressing, about 15 per cent. of the water being expelled by the feeding mechanism where wet grains are fed. Either exhaust or live steam may be used for drying purposes, but the latter will be automatically reduced in pressure before admission to the drying cylinder, over the heated surface of which the grains are distributed by revolving shovels, in order that the grains may not be exposed to a higher temperature than 116°. About 100 pounds of dry grains may be produced by the expenditure of 50 pounds of coal where live steam is employed, the use of exhaust steam entailing no back pressure on the engine or other source.

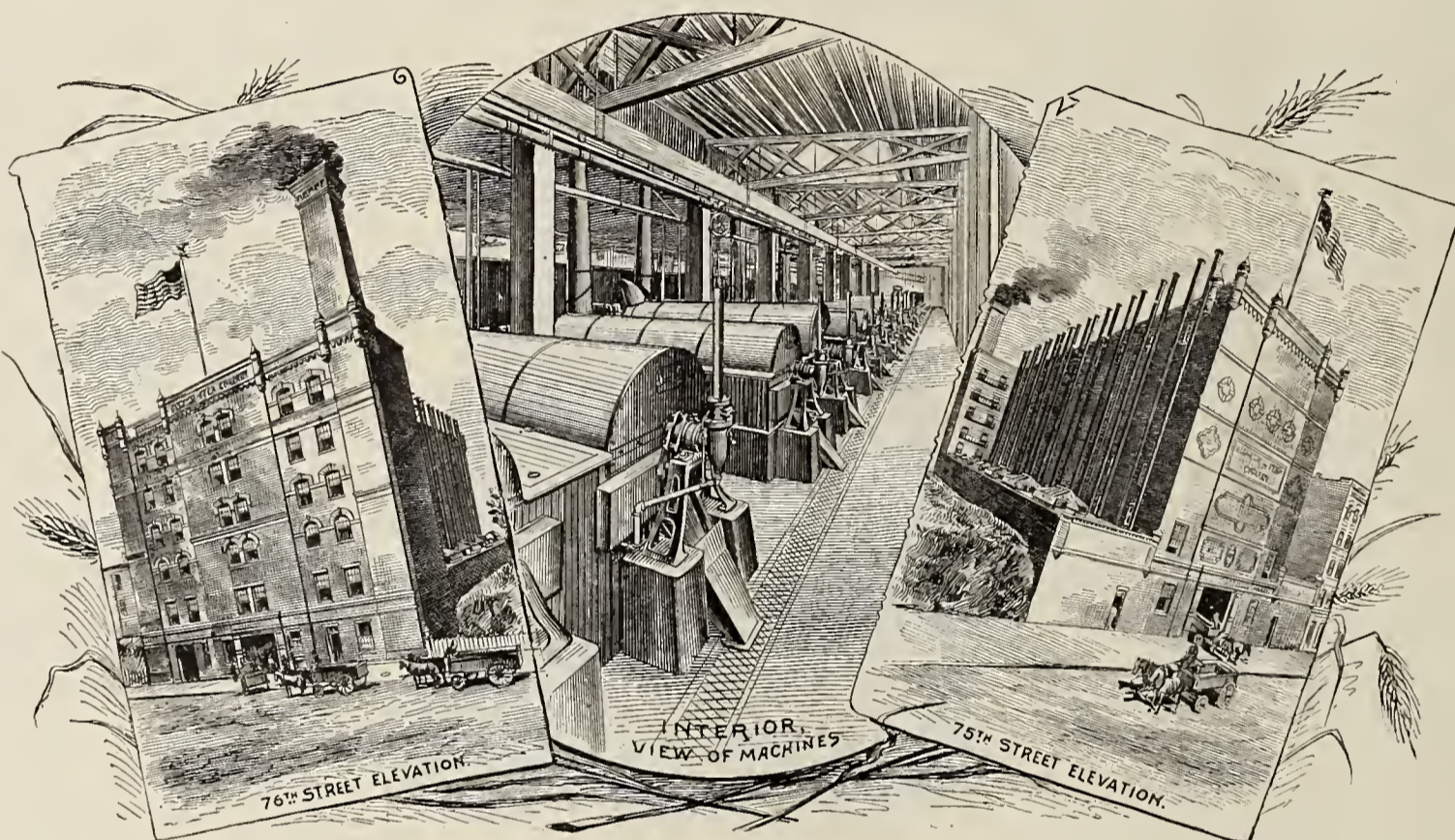
Properly supplied with steam, the machine will convert eight pounds of wet grains containing 75 per cent. of water into two pounds of dry grains every minute, working automatically as long as supplied with grains and steam, and requiring, even where a press is employed, less than 2-horse power per machine for its operation. At the same time, the feed produced is of a superior quality, dry enough to insure the preservation of the albuminoid constituents, and not roasted so as to coagulate and render them indigestible. Two men, one on the feeding platform and one in front, attend to the 20 machines in the above establishment. The machine is noiseless and is completely inclosed to prevent the escape of dust or vapor, so that it can readily be set up in any available space in a brewery or other building.

A sufficient number of machines in the establishment described are connected with the steam engine to use whatever exhaust steam it may furnish, the remainder receiving live steam from the boilers, of which there are two on the ground floor of the Seventy-sixth street wing, each of 125-horse power and of return tubular pattern. Here is also a tank into

which the condensed water from the steam used in the driers is returned almost at boiling point, for boiler feeding purposes. A neatly equipped office has also been fitted up in this wing, at the opposite end of which is the spacious engine room, containing an 85-horse power engine, and a machine and repair shop, space being left and a bed provided for a duplicate engine.

The grains, coming from the drying machines, pass along a conveyor to the Seventy-sixth street wing, in which all the millwright and elevator work is located. They are carried to the fifth story, weighed in an automatic scale and again elevated into a cooling drum on the sixth story, where their temperature is reduced to that of the atmosphere, to prevent their darkening in color when stored. From the cooler they pass into a conveyor which runs from end to end of the main building and is connected by spouts at about every twelve feet with an immense grain storage bin, which occupies the whole of the third, fourth and fifth stories of the main building and will hold 4,000 tons of dried grains.

The construction of this great receptacle received the most careful consideration from the architect. The bottom is hopper shaped, a row of heavy columns



GRAIN DRYING PLANT OF THE FARMER'S FEED CO., NEW YORK CITY.

carrying the bulk of the weight, and with the V-shaped bottom relieving the side thrust on the walls into which the iron beams are securely anchored, the massive iron frame of the bin forming a structure in itself.

Under the bottom of the bin, on the second floor of the main building, are the packing spouts and machines for packing the grains under pressure into bags for foreign markets. The remaining portion of this floor and the greater portion of the Seventy-sixth street wing are used for the storage of the grains packed in bags ready for shipment.

Twenty-five thousand bushels of buckwheat were bought and shipped from Cochran, Pa., during the week ending October 21. The lowest price paid was 40 cents. The crop is very light in New York and adjoining states.

When wheat was 54 cents per bushel the farmers were slow sellers, waiting for what was confidently expected by all, a rise in price. The expected rise did not come, and slowly but surely the price receded until 44 cents was reached yesterday—a loss of 10 cents. Some have been holding in elevators and besides the reduced price have elevator charges accruing at the rate of 1 cent per month per bushel. It is a matter of pre-eminent importance to the farmer when to sell to receive the best returns. Immediately after threshing seems this year to have been the proper time.—*Jamestown (N. D.) Alert.*

SHIP CANAL BUILDING.

Ship canal building is again assuming prominence in the United States, at least so far as projects more or less advanced are concerned. Many old schemes are being revived and new schemes are being placed before the public. The Chicago drainage canal, while it has other objects than those of a commercial nature most prominent, is undoubtedly the most important work under construction, and is about the only one that has yet advanced beyond the initiative stage. The Hennepin Canal has had \$1,000,000 appropriated by Congress as a beginning, and land condemnation proceedings are begun and about four miles of right of way are secured. The Cape Cod Canal has once more attracted new contractors, and engineers are at work on new surveys from Buzzard's Bay. Among the more airy schemes may be mentioned the Lake Erie and Pittsburg and the Lake Erie-Miami-Cincinnati ship canals, neither of them having much prospect of construction.

A Minnesota canal company has been incorporated, with \$20,000,000 nominal capital, to connect Duluth with the Mississippi River, and a very active promoter is urging upon Canadians the project of connecting

lakes Huron and Ontario, though it would seem in the latter case that the prospect of concessions for selling water, light and power was of even more importance to the backers than the interests of the grain fleet. The Nicaragua Canal, the most important of all proposed, is in difficulties just now owing to the present financial condition, but there is some prospect that this cloud will pass away and the canal be built yet by Americans.

On the other side of the Atlantic

ship canals are certainly having their day, though they are having their difficulties too. The North Sea and Baltic Canal, involving an expenditure of about \$40,000,000, is two-thirds done, and is promised to the fleets of the world in 1895. The Corinth Canal, after twelve years' hard work and its share of financial disaster, is finally opened to traffic, after expending nearly \$15,000,000 instead of the original estimate of \$6,000,000. The Manchester Ship Canal builders have had a somewhat similar financial experience, and the ultimate cost will probably be nearly \$80,000,000, though the contract was originally let to Mr. Thomas A. Walker for a lump sum of \$27,750,000, including the construction of the docks at Manchester, Eastham, etc. Among the ship canals projected in Europe is one connecting Bruges with the North Sea, and French engineers are now making the surveys for a canal connecting the port of Marseilles with the canal and river systems of Europe. Farther away the Russian government is reported to have again opened up the problem of a 500-mile canal north of the Caucasus connecting the Caspian Sea with the Black Sea by way of the Sea of Azof.

Broom corn valued at \$14,321 was exported during September, against exports valued at \$5,158 in September preceding; and during the nine months ending with September broom corn valued at \$124,808 was exported, against exports valued at \$79,554 during the corresponding months of the year preceding.

1,200-HORSE POWER TURBINE FOR NIAGARA.

Another immense water wheel has just been shipped to Niagara Falls by James Leffel & Co. of Springfield, O. The new wheel is very similar in design to style 23, shown on page 45 of their 112-page pamphlet, which they send to engineers and others interested.

The wheel is of the new type, on horizontal shaft, and is known as the James Leffel Double Discharge Turbine, the entire weight being 30 tons. The water will be conducted to the wheel from a canal near the top of the cliff by an eight-foot pipe extending downward until it reaches the mill, located near the foot of the cliff. The water will enter the cylinder casing of the wheel from below, passing upward a few feet, filling the case, and thus obtaining the head pressure.

The amount of head will be about 130 feet; the wheel being some 67 inches in diameter, a speed of 225 revolutions will be obtained, and almost or quite 1,200-horse power developed. The runner is made of bronze, with a very strong, heavy iron center, all nicely proportioned and designed, and the mechanical construction finely executed. The wheel will connect direct to the powerful wood grinding machinery, obviating entirely the use of the gears or belts. The machines will be located on each side of the wheel, affording a very simple design and arrangement for the whole plant.

INSECTS IN GRAIN AT THE WORLD'S FAIR.

About a month before the World's Columbian Exposition closed weevil were discovered in a number of the exhibits of foreign grain and all the newspaper reporters on the grounds immediately put the clamps on their imaginations in a vain attempt to determine what would result.

One predicted that all the crops of this country would be completely destroyed by the pests next year. One all-knowing wiseacre informed the credulous public that unless all the grain was removed from the Agricultural Building and burned the working of the insects would set the building on fire and destroy the Fair. Wild pictures of crop failures and famine were vividly depicted in many of the newspapers. Finally Prof. C. V. Riley of the Division of Entomology of the Agricultural Department, was called upon to examine the exhibits in the Agricultural Building, and the following is what he found infesting cereals: 1. Rice weevil (*Calandra oryzae* L.). 2. Grain weevil (*C. granaria* L.). 3. *Calandra remote punctata*. 4. *Sitona surinamensis*. 5. *Sitona cassiae*. 6. *Sitona adreata*. 7. *Typhla fumentia*. 8. *Tenebrioides mauritanica*. 9. *Tribolium ferrugineum*. 10. *Tribolium sp.* 11. Drug store beetle (*Sitodrepa panicea*). 12. Cigarette beetle (*Lasioderma serricorne*). 13. *Lomophloeus ferrugineus* (?). 14. Angoumois grain moth (*Galeucia cerealella*). 15. Grain moth (*Tinea granella*). 16. Indian meal moth (*Plodia interpunctella*). 17. Mediterranean flour moth (*Ephesia kuehniella*).

Of the above, Nos. 1 and 14 are most important. No. 1 is perhaps the most widely distributed of known insects, being found in all quarters of the globe where grain is used, but is more injurious in tropical climates than in our own country, where, though it ranges from Alaska to Florida, it does its greatest damage in the Southern states. It is found in nearly all the cereal exhibits of tropical countries, as of Guatemala, Costa Rica, Mexico, Trinidad, Brazil, Paraguay, Uruguay and Argentine Republic of this continent, and in Cape Colony, Liberia, Orange Free State, Siam, India, Ceylon and Java of the Eastern Hemisphere, and Australia.

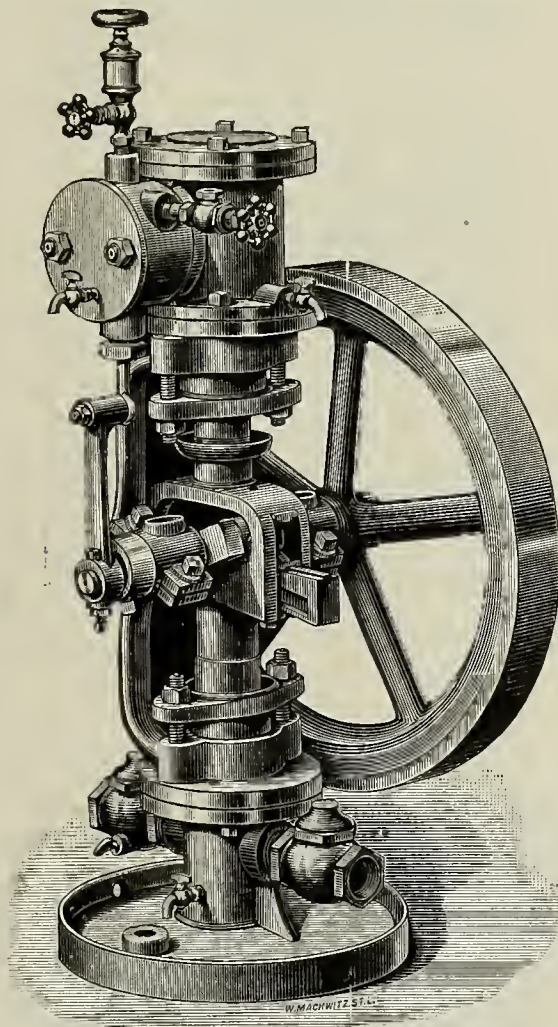
The mature weevil is a beetle about one-eighth of an inch long, dark brown, with four reddish spots at the corner of the wing cases. The female lays her eggs in the kernels of the grain, and the young are whitish grubs, which, after transforming to the pupa state, issue as perfect beetles again. One generation follows another in from three to eight weeks. The egg-laying period of a single female continues through several weeks, and as there are from six to eight broods annually, the remarkable rapidity with which grain is ruined is not to be wondered at.

No. 2 likewise abounds in Southern grain fields and

granaries. It is a moth of a light, grayish color, with four wings spotted with black. It measures half an inch across with wings expanded, and quarter of an inch with wings closed. The eggs are delicate, pale red in color, with prismatic reflections. The young are small, white, active worms, with a dark head, moving about actively by means of legs and spinning a silken thread. This species is found in almost all exhibits, and is flying all over the grounds.

THE RELIANCE PUMP.

The Reliance Steam Pump illustrated herewith is claimed to be one of the best boiler feeders made. The makers say it combines the best features attainable in any plunger pump, and will stand up to the most severe tests necessary to demonstrate its claim to a place in the front ranks. Every part is absolutely interchangeable and its simplicity of construction and the ease with which it can be operated are points that should commend it to any one needing a steam



THE RELIANCE PUMP.

pump for feeding boilers. It will pump both hot and cold water, and will run on four or five pounds of steam pressure.

The Reliance Plunger Pumps are made in five sizes: Namely, Nos. 2, 3, 4, 5 and 6. The No. 1 Reliance Pump is a piston pump and is made in one size only. It will feed a 15 to 18-horse power boiler. It is neat in design, of good workmanship and positive in action. The makers, the Decatur Novelty Works of Decatur, Ill., guarantee the Reliance Pumps to be first-class in every respect.

This company also manufactures engines, boilers, feed water heaters, steam users' supplies, tanks, stacks, shafting hangers, pulleys, castings and general machinery, regarding which they will be pleased to give information to intending purchasers.

The receipts of wheat at Ft. William, Ont., during the four weeks ending November 4, according to Chas. N. Bell, secretary of the Winnipeg Grain and Produce Exchange, were 1,985,527 bushels. No record is given of the corresponding weeks of 1892. The shipments of wheat during the four weeks ending with November 4 were 1,539,954 bushels. No record is given for the corresponding weeks of 1892. The estimates given do not include grain from the interior passing by rail via the Canadian Pacific line north of Lake Superior. The stock of wheat in store at Ft. William on November 6 was 1,310,306 bushels.

CAUSE OF LOW PRICES FOR WHEAT.

The agricultural classes have been much slower than any others to understand that the introduction of machinery in harvesting and handling their crops has not only reduced the cost of production, but also the prices in the market. This truth has long ago been realized by all classes of manufacturers. The cheapening of the cost of making their articles would have given them a larger profit on their sales if they had possessed a monopoly of production, but to-day all the commercial countries are so directly bound together in business, and they come into such close competition with their respective products, that they are forced to meet this competition; therefore, instead of making the entire profit that the cheapening of production would permit, producers everywhere are forced by competition to divide their profit with the purchaser.

The farmers of the Northwest, indignant at the low prices of wheat, have in some cases declared their intention not to raise that grain if they are to sell it at 50 cents a bushel. The cost of producing wheat has been so lessened by the easy work of prairie tillage and by the use of labor-saving machinery that old high prices never will be realized again except in years of universal drouth and blight destroying the supplies of the world, or in years of great wars, when immense populations are withdrawn from labor in the wheat fields to take places in the ranks on battle fields. With steam plows working in gangs which turn furrows over ten or twenty acres a day, with combined reapers, binders and threshers, each saving the work of forty men in the harvest field, the price of wheat must go down one-half, because the cost of production is reduced one-half.

If this be not true as to cotton, it will be sooner or later. Inventive genius is at work perfecting cotton-picking machinery, and with that and approved methods of cultivating, the cost of making cotton must be largely reduced. Those planters who use the improved methods will do so on a large scale, and they will make the selling price of the staple. The cotton growers have been constantly urged to diversify their crops so as to make as nearly as possible all that they consume, and rely on cotton for a cash crop. The wheat farmers of the Northwest are coming to this view of the subject.—*New Orleans Picayune*.

A NEW ELEVATOR FOR OATS AT ST. LOUIS.

A new elevator is now ready for business in this market. This is the Exchange elevator, of which H. S. Potter is president; R. C. Tunstall, vice-president; R. B. Tunstall, secretary, and J. H. Tice, assistant secretary.

This elevator is located on Theresa avenue, is just adjacent to the St. Louis Hay Exchange, with the same management, and has track connection with all roads centering here. It has a capacity of 125,000 bushels and is specially built for handling oats exclusively, having a large number of special car lot bins particularly adapted for storing oats. The managers have had a good many years' experience in this particular line of business and fully understand what is necessary to satisfy both the shipper and buyer.

Every care will be taken to give good weights, and as a precaution and assistance to that end they have put in extra large hopper scales that will weigh any ordinary car of oats in one draught, whereas, in nearly all ordinary elevators, it is necessary to split each car into two or more draughts. These scales have attached to them Demuth check beams, which register the weight of each car in letters as well as figures, and it is impossible to make but one weight with any given combination of letters. This guards against error in reading the beam and entering it in the weight book, as an error, if made, can readily be detected at any time afterward.

The location of the elevator is especially favorable for this line of business. Since about 90 per cent. of all hay sold in St. Louis is handled by the exchange and the buyers of hay and oats are the same, thereby it concentrates two interests that naturally should be near together.

THE QUESTION OF GRADE.

There is always someone who is dissatisfied with wheat grades, and very likely there always will be. There are occasional errors in grade, but it is seldom that they are not discovered and rectified before the wheat is sold. An expert eye is required in the grading of wheat. A little examination into grades will demonstrate this to the most prejudiced. It is for this reason, probably, that there is a general disposition to find fault with wheat grades. The seller of wheat is quite apt to think he has been wronged if his product does not receive the highest grade, and the buyer wonders if his purchase is not too dear if it is of the highest grade.

The eye that is unaccustomed to pass upon wheat grades will be misled very often. A shipper sends a lot of wheat to one market and it grades No. 1 hard. He at once assumes that justice has been done his shipment, because there is no more that he could ask. He makes up a shipment to another market and the lot grades No. 1 Northern. He at once assumes that an injustice has been done him, because a part of his wheat graded higher in another market, when, so far as evidence goes, admitting the two shipments to have been equal in quality, the error might have been made in making the higher grade. This shipper will at once conclude that it is preferable for him to ship to the market that gave him the best grade, and with that he will assume that an intentional wrong was done him in the other market. This is a natural reasoning, for which the shipper cannot be blamed, and yet it very often is unjust. There is not the wrong grading made that is assumed.

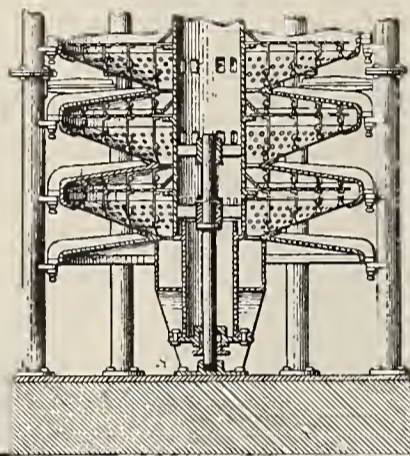
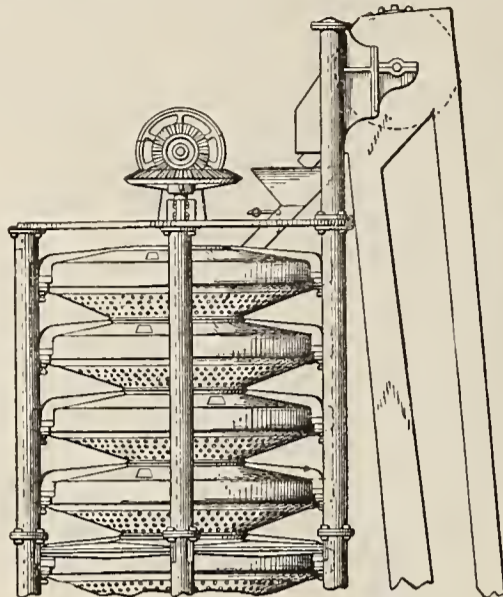
A shipper sends a lot of wheat to one market and it grades No. 1 hard. His neighbor sends to another market and it grades No. 1 Northern. The latter is confident that his wheat was just as good as A's, and he charges manipulation of grade. What is the fact, maybe? An examination of A's shipment shows that the wheat is well filled with gluten. The breaking of the kernel does not reveal the white substance that looks like flour, and which characterizes the No. 1 Northern grade. Instead it is of a grayish color. An examination of B's shipment shows a good-looking wheat on the outside. The kernels are plump, the color is good, but the kernel is deficient in gluten. The grading was correct. This is not an uncommon experience.—*Minneapolis Journal*.

IMPROVED DRYING AND MALTING APPARATUS.

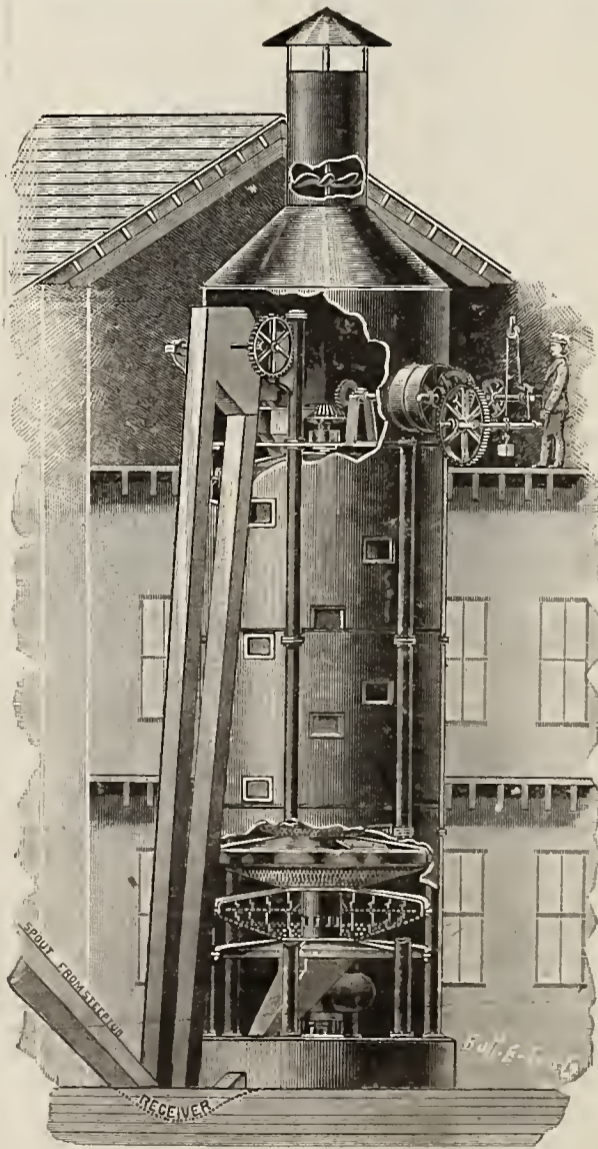
A new improved pneumatic malting and drying apparatus has been patented and placed upon the market by H. Rathmann of Buffalo, N. Y. In a single machine he has combined approved features of a germinator and dryer. He claims it is equally well adapted for both operations.

An important economy in floor space is thus gained, and the additional expense of a separate apparatus of each kind is saved. The cut shows the upper part of the apparatus in elevation, and the lower part in section. It consists of a number of horizontal compartments arranged one above the other, and supported by strong iron columns rising from a firm base. In each compartment is a rotating perforated table, on which the malt is spread and turned by oblique blades depending from the top of the compartment, which gradually move the grain toward the edge of the table. From the latter the grain drops upon the bottom of the compartment, and is gradually fed inward by oblique blades secured to the bottom of the rotating table, the grain being discharged through a central opening in the bottom of the compartment upon the table of the compartment next below. The material is in this way slowly passed from the top to the lowest table, dropping from one to the next, until it finally reaches the bottom compartment, from which it may be elevated and again passed through the apparatus, if necessary. The tables are secured to a hollow upright shaft or tube extending through all the compartments and connected with a fast and slow driving gear, so that it may be turned very slowly in germinating or more rapidly when the apparatus is used as a drier. Air of the proper temperature for germinating is supplied to all the compartments

through the central shaft by a suitable blower, the shaft having tiers of holes through which the air enters the compartments. The grain on the several tables is thus evenly exposed to the warm and moist



IMPROVED DRYING AND MALTING APPARATUS.
air, and a malt of a uniform quality is produced. After germination, hot air is supplied to the hollow



IMPROVED DRYING AND MALTING APPARATUS.
shaft, the tables are run at a higher speed, and the malt is elevated into the top compartment and repeatedly passed through the apparatus until properly dried. The advantages claimed for the apparatus as

a germinator are the continuous production of malt in warm as well as in cold weather, saving of space, building expense and labor. Saving of malt, because the attendant does not enter the apparatus and tread on the malt. The advantages as a drier are saving of space and building expense, saving of fuel, time and labor and perfect malting and a saving of malt, the drying being so even as to prevent the production of flinty malt. The apparatus for both purposes is very complete and substantial, and as there is but slight wear and tear, repairs are seldom required. The apparatus is absolutely fire proof, reducing the rate of insurance to a very low figure.

HEAVY SHORTAGES IN HAY.

The shortages in the weight of hay after leaving Montreal for English ports are so exorbitant that unless they are checked Canadian shippers will be driven out of the business. The port on the other side, where most of the shortages occur, is London, where they range from 5 to 8 per cent. In Bristol the shortages are not so heavy as in London, a recent shipment of 300 tons to the former port, turning out only three tons short, or 1 per cent., while at the latter port shortages of five to eight tons on lots of about 100 tons are of frequent occurrence. All the above lots referred to were weighed on the public scales here, and yet the shortages at London are much heavier than at Bristol.

One per cent. shortage, our shippers say, is not out of the way, as there is sure to be a loss in loading and unloading through short and broken hay falling from the bales, but this, it is contended, should never exceed 1 per cent. When, however, shipments lose 6 to 8 per cent. on the other side, if it is not the result of gross carelessness in weighing, or defective scales, then it must be attributed to something worse.

A shipment of 100 tons was recently made from this port to London via New York. Upon arrival at the latter port it was weighed and tallied within a few pounds of shippers weight here; but the receivers in London claimed a shortage of about ten tons. This is one of the worst deficits in weights that has taken place since the export hay trade commenced, which shows there is something radically wrong at the port of London, which the authorities there cannot afford to ignore.

Bristol and Liverpool have both had complaints lodged against them for undue shortages, but nothing in comparison to those of London. We do not say that these shortages have been claimed in order to offset the decline in prices upon contracts made some time ago; but we cannot help voicing the opinion of shippers here, who claim that there is a great deal of mystery about them. In brief, unless these big differences in weight against Canadian exporters are stopped, the port of London will be avoided by them altogether, for as things now stand, if they are offered good prices for their hay, they are never sure that it will not be offset by shortages that will take away all their profits. This is a pretty serious retribution against the port of London, but it is unfortunately too true.—*Montreal Trade Bulletin*.

Theodore M. Stephan, United States Consul at Annaberg, Germany, has furnished the state department at Washington information to the effect that now that the restrictions on the importation of American pork have been removed, American hay is receiving considerable attention. The exclusion of Russian hay from Germany by ministerial decree has been followed by the condemnation of American hay in the laboratories of the German chemists. The German press has published the analysis with appended warnings against the American product. They make out that the analysis shows that there is less nutriment in American hay than in the hay of Germany, and warning is also raised that the use of American hay is introducing new insects into Germany. German chemists can find no better way to injure their reputation than to spread such wild tales concerning American hay. If they wish to stop its importation other means will have to be resorted to, yet the restrictions, if taken, will probably end the same as in the case of American pork.

COMMUNICATED

[We invite correspondence from every one in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

ILLINOIS ITEMS.

Editor American Elevator and Grain Trade:—M. White of Ottawa, Ill., has built a loading house on the C. R. I. & P. Railroad, equipped with the latest and best machinery, including a Caldwell Charter Engine. He will use his canal house for storage only during the winter. Whitney & Co. at Varna, Ill., whose two houses and 40,000 bushels of grain were recently destroyed by fire, began on the 13th of November the erection of a new house of the latest and best style.

Respectfully yours, C. T. HIGBEE.
Ottawa, Ill.

OFF YEAR IN WASHINGTON.

Editor American Elevator and Grain Trade:—Since last writing you I have formed a partnership with J. M. Perry of Spokane, the style of the firm being Perry & Chalenor. Your valuable paper comes regularly to hand, and its contents prove at all times highly interesting and instructive. This is surely an off year for the business in this section of the country, and the situation may be briefly summed up as follows: With 25 per cent. of grain total loss, and 25 per cent. merchantable, the remaining 50 per cent. can be utilized for seed and feed purposes.

Yours truly, W. F. CHALENOR.
Palouse City, Wash.

A STRONG CAR MOVER NECESSARY.

Editor American Elevator and Grain Trade:—I was pleased to see that you had a full description of my car mover in the October number of the AMERICAN ELEVATOR AND GRAIN TRADE, but I will have to call your attention to some remarks which were printed in regard to it, viz., that it is so inconvenient for taking from place to place. This is a great mistake. In the first place it is hard to judge from appearance. If you want to move from 60,000 to 100,000 pounds you must have something strong, when it is handled by rough labor as is generally the case. I have been a regular subscriber to the AMERICAN ELEVATOR AND GRAIN TRADE for years.

Yours truly, P. H. JACOBUS.
Millstadt, Ill.

IMPORTS OF HAY BY GERMANY.

Editor American Elevator and Grain Trade:—Since some time the large imports of hay from foreign countries to Germany have ceased. The second crop of hay was very good and extensive enough. The different shipments from North America, Canada and South America as well, especially in the large towns, found willing buyers. With a few exceptions the hay from America was pressed in bales and of good quality. It was sound and well packed. The package and the brands according to which the hay was divided shows that this article must have been before largely shipped in America and the machines for packing and pressing must be well constructed.

The best hay from North America is generally timothy or red clover. The former seems to suit better for being pressed into bales than the latter. Not to forget, however, that among the different varieties of hay which come to this market there were some bales of not so good quality, showing hard grass, and sometimes even common prairie grass. Samples of the American hay which was sold here were sent to Kiel and examined. A sample of choice timothy hay contained 11.28 per cent. of water, 6.14 per cent. of protein, 1.74 per cent. of fat, 43.36 per cent. of carbohydrate, 32.55 per cent. of rough fiber, 4.93 per cent. of ash. A sample of clover mixed hay contained 10.32 per cent. of water, 6.76 per cent. of protein, 1.64

per cent. of fat, 36.97 per cent. of carbo-hydrate, 39.27 per cent. of rough fiber, 5.04 per cent. of ash.

This examination confirms that the American food contains less protein than the German hay. Of especial good quality seems to be the hay from Chile, which is known under the name alfalfa. It is of a light green color and put up in bales of 80 kos. of which one looks quite as the other. A quantity comprising 100 tons distinguished itself through its packing and excellent appearance. Roumanian and Russian hay was also imported. More hay was imported by France and England than by Germany. The prices which were paid in these countries were about 5 to 6 marks. Here, however, the prices were only 4 to 5 marks. Larger lots were again re-exported from here to Havre and sold there.

WILHELM MUHLE.

Hamburg, Germany.

OUR BOSTON LETTER.

Editor American Elevator and Grain Trade:—Trade has been rather quiet for the past month with the exception of a few spurts. The weather in the country has been too mild to help the grain business any. Prices have ruled low, feeds in particular. With colder weather and the closing of the lakes business will probably improve.

RECEIPTS FOR OCTOBER.

Articles.	1893.	1892.
Cotton Seed Meal, bushels.....	4,542	18,640
Corn, bushels.....	1,292,562	1,115,225
Wheat, bushels.....	705,883	392,143
Oats, bushels.....	567,015	851,640
Rye, bushels.....	6,395	4,125
Mill Feed, tons.....	4,336	5,429
Oatmeal, sacks.....	1,275	1,320
Oatmeal, barrels.....	4,566	3,439
Corneal, barrels.....	16,438	14,374
Barley, bushels.....	14,842	4,698
Malt, bushels.....	84,428	117,700
Hops, bales.....	1,239	1,014
Peas, bushels.....	7,350	11,237
Flour, barrels.....	165,086	165,710
Flour, sacks.....	281,139	216,544
Hay, cars.....	3,183	1,602
Straw, cars.....	167	151

EXPORTS FOR OCTOBER.

Articles.	1893.	1892.
Wheat, bushels.....	365,119	549,247
Corn, bushels.....	752,539	176,452
Oats, bushels.....	1,445	63,900
Peas, bushels.....		8,065
Buckwheat, bushels.....		
Corneal, barrels.....	7,668	4,869
Oatmeal, barrels.....	540	1,215
Oatmeal, sacks.....	1,087	995
Flour, sacks.....	180,420	242,310
Flour, barrels.....	30,584	37,162
Mill Feed, tons.....	5,200	
Hay, bales.....	79,876	

Our young and popular secretary, E. G. Preston, was presented with a large hall clock by the members and with a banquet lamp by the directors, he having recently been married.

Yours, etc., BUNKER HILL.

WHEAT IN THE GRAIN ONLY.

Editor American Elevator and Grain Trade:—I inclose another blank from your paper with guess filled out. I think you ought to have stated some where as to whether the figures of export you are to decide by including all flour exported, or only the kernel. I am not aware which is the custom in the figures which you are to go by, but I infer it takes in flour figured back to wheat.

I inclose a circular letter that has been sent to most of the country newspapers of North Dakota and Minnesota the last week. It likely is not in accord with your "politics," but believing so firmly as I do in higher prices before another harvest, and sincerely anxious to have the producers of the Northwest secure a better price and larger share of the profit for their hard work, I have felt like acting thus boldly even at the risk of much adverse criticism. I have figured that those who have had to market as soon as thrashed, or those who have had no personal faith in the future advance in prices, and no desire to hold, have about all now got to market, and that the others may be encouraged to act together and more firmly secure a better price.

While I am aware that America does not often establish the price of wheat, yet I think every year

Europe is looking more to us to take the lead in advancing prices, and it appears to me as though the situation next April would be such that there would not be enough wheat to satisfy our American needs, unless some of that surplus was called out that will not come out except a better price will be paid for it. There is likely 50 to 100 million bushels of the wheat now in the United States that positively will not be obtainable at prices within 10 or 15 cents of present prices.

Yours very truly, CHAS. L. HYDE.

The circular referred to is as follows:

HOLD YOUR WHEAT.

NOVEMBER 8, 1893.

EDITOR

My Dear Sir: Every country in Europe, excepting Russia, has this year had a short wheat crop. Our own crop is at least 100,000,000 bushels under last year and 200,000,000 less than we raised in 1891.

The general financial stringency of the last six months has brought out large supplies, for all the harvest this year has been a poor one. This has kept the market price down. The price is governed by the law of supply and demand. For over a year we have had too liberal a supply.

The exports this fall have been large, amounting to about 80,000,000 bushels since the last harvest began. It is doubtful if Jan. 1, 1894, there will be enough wheat in the United States to meet our usual requirements till after another harvest. As a result of the present low price a smaller acreage of winter wheat has been sown than for several years past.

After a thorough investigation of the conditions existing I feel certain that the year 1894 will bring much higher prices for wheat, and I do not hesitate to urge every one of our Northwestern producers to hold their wheat in hand for a few months. We just as well keep, at least, a part of this extra profit for ourselves as to give it to the elevators and millers by selling now. I myself have two crops on hand and it shall rot before being marketed at the low prices of the past year.

The conditions are such that every bushel of wheat now remaining in the producers' hands can be made to bring one dollar before another harvest, if all of it would be held for that price.

Each day the world consumes over 6,000,000 bushels of wheat and the present large supplies at terminal points would rapidly decrease, if the farmers would cease, for a time, to augment them.

Will you not help the Northwest to save a little more of the great wealth it produces, by giving this letter space in your paper.

Yours very truly, CHAS. L. HYDE.

Pierre, S. Dak.

CONDITION OF FOREIGN MARKETS.

Editor American Elevator and Grain Trade:—The number of acres on which this year's wheat was planted in England is 1,972,000 acres, against 2,219,838 in the preceding year. It is astonishing how matters have changed during recent years. During the crop year 1863-64 3,698,000 acres were planted, yielding 16,750,000 quarters. The imports were 6,990,000 quarters with price at 41 shillings. During the crop year 1873-74 3,670,000 acres were planted, yielding 9,350,000 quarters. The imports were 11,285,000 quarters with the price at 61 shillings 3 pence. In the crop year 1883-84 2,713,000 acres were planted, yielding 7,625,000 quarters. The imports amounted to 15,775,000 quarters with price at 38 shillings 4 pence. During the crop year 1893-94 1,972,000 acres were planted, yielding 6,000,000 quarters. The imports amounted to 2,215,000 quarters with price at 27 shillings. From these small crops one estimates that they must import not less than 22,000,000 quarters.

In France this year's wheat crop is estimated at 97,923,075 hectoliters (a hectoliter is equivalent to 2.837 bushels), against 109,264,421 hectoliters last year. The wheat imports of France during the last season were 2,905,000 quarters. In 1891-92 the imports were 14,105,000 quarters; in 1890-91 5,712,572 quarters, and in 1889-90 4,328,159 quarters. The imports must be therefore about 6,000,000 to 7,000,000 quarters. This will be true also if large stocks still exist in the interior. Business was very flat in August. The low prices in America first induced the larger purchases,

but by little and little buyers retired from the market. Offers from the interior increased. Only lately when the financial circumstances in America seemed to become better the market was a little firmer.

The Belgian wheat crop is estimated at 6,000,000 hectoliters, against 6,800,000 hectoliters last year. This estimate is quite sure to be correct. Of the other countries one only supposes that the imports will be about 8,500,000 hectoliters. Antwerp has bought too much La Plata wheat. The need of imports is not so pressing as was hoped, and of 400,000 quarters on hand a large quantity is from La Plata as well as the 450,000 quarters on passage bound for Belgium. The situation of the grain market in August was very depressed.

In Holland they complain about the difficulty of selling wheat and rye, and prices declined still more on account of the large offers from Russia and the Danube which are expected. But as the Russian government made large purchases of grain for military purposes, and the opening of the new grain market resulting from reducing the railway rates, the offers did not turn out as large as expected. The situation in Holland became better.

In Austria-Hungary much was expected from the international seed market in Vienna. But hopes were not realized. Business was quite flat. The wheat prices required could not compete with America. There is no demand for rye in Germany. Oats are not so much as to be exported, and only of barley are larger sales possible. The export business from the Danube began well, but the sudden breaking out of the cholera in the Danubian ports hindered somewhat the export and prices declined. In Germany there are complaints about flat business in general. In Berlin the offers of wheat from America and other countries was lasting and pressing. Offers from the inland also increasing, business fell down and few buyers were in the market. The bad financial circumstances in America discouraged speculation, and as people desired to realize their contracts on the harvest terms early, the large sales and realizations induced prices to decline 8 to 10 M. Only lately when the American silver bill was given up have prices somewhat improved.

Hamburg, Germany.

WILHELM MUHLE.

PITTSBURG RULES FOR GRADING HAY.

The Pittsburg Grain and Flour Exchange adopted the following rates for grading hay October 16:

Choice timothy shall be strictly bright, sweet timothy, not more than one-tenth undergrass, properly cured and well baled.

No. 1 timothy shall be timothy and not more than one-fifth other tame grasses mixed, good color, well cured and free from bleached hay.

No. 2 timothy shall be not more than one-third of other tame grasses mixed, reasonably good color and free from must.

No. 3 timothy shall be one-half timothy mixed with other grasses, and not more than one-fifth clover, reasonably good color, partly stained or over-ripe, and free from must.

No. 1 clover and timothy mixed shall be sweet clover and timothy mixed, with one-half or more timothy, good color and well cured.

No. 2 clover and timothy mixed shall be clover and timothy mixed, with one-half or more timothy, reasonably good color, partly stained and free from must.

Clover shall be all or nearly all clover hay and graded according to the requirements of Nos. 1 and 2 clover and timothy mixed hay.

Upland prairie hay shall be all pure upland hay, good, bright color and well cured.

No. 1 prairie hay shall be upland or midland prairie hay, good color, well cured and free from must.

No. 2 prairie hay shall be midland and partly mixed with swale hay, good color, well cured and free from must.

No. 3 prairie or packing hay shall be soft swale or slough hay, not good enough for No. 2, and free from must.

No-grade hay shall be sound hay mixed with rough grasses, willows or flags.

Rejected hay.—All kinds of hay, badly stained or in any way out of condition.

Queries and Replies.

Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column.

No. 11. Buckwheat Wanted.—I wish to buy a car of buckwheat. Will some dealer kindly inform me where I can be supplied and at what price? T. G. WHITE, miller, Marion, Ia.

No. 12. Keeping Deposit Accounts.—We should like to learn through the columns of the AMERICAN ELEVATOR AND GRAIN TRADE what is the general plan of keeping accounts of grain deposited by farmers in country houses. We want some good plan for reducing and facilitating the work. LIBERTY ROLLER MILLS & ELEVATOR, Basil, O.

No. 13. Where is Good Opening for Elevator?—I would like to be informed where there is a good location in Nebraska or the Dakotas where there is no grain elevator and where it would pay to build one. I wish to make a change and would prefer to build a new elevator at some good point in the Northwest. I do not care if it is a small R. R. station so that it has a good country and territory to draw from. I would like to learn full particulars. F. J. WOOD, Lilly Chapel, O.

THE WORLD'S PRODUCTION OF OATS.

That the crop of oats in the world this year has been extremely short is well known, but the extent of that deficiency is much a matter of conjecture. We therefore give below the estimated crops of the past two years, with an average for each country, the latter having recently been compiled by a French authority (000 omitted):

	1893. quarters.	1892. quarters.	Average quarters.
U. S. America.....	80,000	83,000	75,000
European Russia.....	60,000	59,000	63,000
Germany.....	30,000	38,750	33,000
France.....	20,300	26,760	30,000
United Kingdom.....	17,000	21,000	21,000
Austria-Hungary.....	19,000	20,600	20,000
Sweden.....	6,000	7,000	7,000
Denmark.....	4,000	4,250	4,900
Italy.....	2,225	2,100	2,750
Canada.....	7,000	8,000	7,250
Belgium.....	2,500	3,000	3,000
Holland.....	1,250	1,500	1,400
Other Countries.....	7,005	8,500	8,800
Total.....	256,275	283,460	277,100

Previous records show that the present year's crop is the smallest for many years past, not even excepting the Russian famine year of 1891, when the crop in that country was only 50,000,000 quarters, but in America was no less than 92,000,000 quarters.

MAINTAINING A COUNTRY GRAIN MARKET.

For some time the citizens of Pontiac, Mich., have been seeking to have a grain market established at that point, and finally they have agreed to pay \$2,000 to a firm of grain buyers to maintain Detroit prices, less freight, at that point. A citizen, writing about the different plans proposed, says: As the subject of a grain market in Pontiac is under discussion, it may not be out of place to present the different plans proposed. It has been suggested that a new elevator be built, with modern facilities, at a total expense for ground and building of \$5,500, this sum to be furnished by the city or by business men.

Two ways of running this new elevator have been proposed. The first is to organize a stock company made up of business men for the purpose of furnishing the money, and employing a manager to represent the company. Secondly, to secure someone willing to undertake the grain business, if a modern elevator were furnished. One other plan has been proposed, but let us now discuss a new elevator and the manner of conducting the business. A grain buyer or manager must be employed at not less than \$900 per year. Then one other man at not less than \$1.50 per day. Then we have office expenses to pay, including stationery, postage, telephone, telegraph,

power, etc., amounting to about \$250 per year, bringing total yearly expense up to \$1,619.50. Now the stockholders have paid out \$5,500 for elevator and ground, provided for a running expense of \$1,619.50, but have not yet reckoned the interest on the moneys which, at 7 per cent., amounts to \$385, making a total expense for the year of \$7,504.50, and a yearly expense thereafter of \$2,004.50. In the foregoing not one cent has been provided to run the business.

Unless we run it ourselves we must find some man to run it. Can he run it at less expense than we have figured? His services would be worth \$900 per year, and his other expenses would be no less than we have estimated. So that, without figuring anything for the use of his capital, it would cost this buyer to run business one year \$2,004.50. To handle grain he must have sufficient margin to pay the expense, \$2,000.

Let us suppose that during the year he handles 100,000 bushels of grain: how much margin must he have to cover expenses? Two cents per bushel! Can any man purchase even 50,000 bushels of grain in Pontiac, with the competition in surrounding towns, on any such margin? I think not. If he can purchase even 50,000, then on the two cent margin, only one-half of the expense has been provided for. How will he get the balance? By taking enough margin to cover the whole expense. That would be four cents a bushel. There would still be a shortage in the expense account, for now the farmers would refuse to sell here the 50,000 bushels necessary to cover expenses.

Let us now consider the plan proposed in connection with the Smith Elevator. Responsible parties have proposed, and a contract has been drawn up and is now being submitted, by which these parties undertake to maintain a market in this city. They agree to pay Detroit Board of Trade prices, less expense on the grain after it leaves this station, and to post the prices in some conspicuous place in this city daily. In consideration of this agreement the business men are to pay to them \$2,000 per year, payments to be made quarterly. Under this agreement no margin has to be provided for expenses in maintaining a market by the grain buyer, hence a much better price can be paid to the farmer. He cannot fail, when he understands what is being done for him by our business men, to appreciate our efforts. With such a market the business men of this city would increase their sales and do more business, and in this increase in business would more than pay the expenses that they are called upon to meet. Should this plan be accepted, no time need be lost. In one week our market would be open. We have a good many places of business in this city and the whole amount can be easily raised. The largest amount subscribed will be comparatively small and the quarterly amount will be hardly felt.

CANADIAN SEED TRADE.

Although it is too early to say what the crop of Quebec timothy seed will be, there is an impression that it will be below the average, says the *Montreal Bulletin* of November 10, as many farmers, believing they would get better prices for their hay than saving it for seed, cut every acre they had for hay. We must, however, wait until the snow roads take before definite results can be known. The clover crop in Ontario is said to be fairly good, according to letters received here from Toronto; but there is very little coming out yet. In this market Western timothy is quoted steady at \$2 to \$2.25 per bushel, clover seed \$5.50 to \$6 per bushel, and alsike \$7 per bushel. In Chicago the price of clover is very high, cash lots of common to good being quoted at \$8 to \$8.90. At present there is no show for Canadian clover in England; but it is too early to look to that market, as January and February will be time enough to consider the export trade.

Flax aggregating 5,444 tons, valued at \$1,599,209, was imported during the nine months ending with September, against 6,418 tons, valued at \$1,517,561, imported during the corresponding months of the year preceding. Hemp amounting to 2,965 tons, valued at \$433,070, was imported during the nine months ending with September, compared with 3,840 tons, valued at \$519,452, imported during the corresponding months of the year preceding.

REGULAR HOUSES AT MINNEAPOLIS.

There are twenty-one "regular" elevators in Minneapolis, three being state houses. Each "regular" elevator, excepting state houses, has deposited with the Chamber of Commerce a bond for 10 cents a bushel for its entire storage capacity, to protect its registered receipts and to insure the faithful discharge of its duties under the rules of the Chamber of Commerce, where it is required to make daily reports of all grain received and shipped, giving car number, initial, bushels, kind of grain and grade.

The weighing is all done by state weighmaster and the inspection by state inspector, with whose inspection and weights the elevator reports must agree. When the elevator reports have been checked with the state weighing and inspection reports, they are entered in the grain ledger. The debit and credit columns of the ledger always show the balance of the grain in the house, each grade and kind being kept separate.

The registered receipts outstanding, of any grade of grain can never exceed the quantity remaining in the house, of that grade. The state weighmaster's reports of out weights always show the amount and kind of grain shipped, with which the elevator report must agree. Registered receipts carry the date when car receipts were taken into the house, the number, initial, bushels and grade. Before a receipt is registered the grain in the house, of that grade, has to be checked up as explained, and if the grain is found to be in the house the receipt is registered. Before registered grain can be shipped the registered receipt must be returned to the registrar and canceled. With all such safeguards thrown about these registered grain receipts, it is believed they are as safe securities as can be found anywhere.—*Market Record*.

THE RICE INDUSTRY OF LOUISIANA.

John A. Hubbard, a Louisiana rice planter and a member of the New Orleans Board of Trade, in writing of the rice industry of that state says:

In the last few years the rice industry has grown in magnitude in Louisiana beyond our most sanguine expectations. Formerly its cultivation was restricted to two river parishes, Plaquemine and La Fourche, and to-day it is an important crop in twenty-five parishes. It is cultivated upon the sandy parishes of the East, the alluvial bottoms of the Mississippi River, its outlying bayous and the prairies of Southwest Louisiana.

The large increase of production in this prairie section has been due mainly to the influx of Western farmers who successfully applied their knowledge of improved implements in the growing of wheat, to the cultivation and harvesting of the rice crop. By the extensive use of gang and riding plows, harrows, seeders, harvesters, etc., the price of growing the cereal has been materially reduced, and has caused an increased acreage in the prairies with slight diminution in the alluvial lands. The total area devoted to rice in Louisiana is about 200,000 acres, growing last year a total crop of about 2,250,000 sacks of rough rice, or 225,000,000 pounds of clean rice. This industry employs about 20,000 men, and supports about 100,000 people. If to these be added those engaged in the transportation, marketing and milling of the crop, it is safe to increase the above to 125,000 people.

The lands, teams, implements and machinery involved in the cultivation of rice have a value exceeding \$10,000,000. Add to this our score or more of expensive mills, which cost on an average \$100,000 each, and we have a grand total of value \$12,000,000, with an annual expense of \$3,000,000 to \$3,500,000, producing 2,000,000 sacks of rough rice worth \$2.50 per sack.

During the past year, on account of our large crop and the importation of foreign rice, prices fell to alarmingly low figures, selling at one time for \$1.60 of 162 pounds, a little below the present import duty, and far below the cost of production. These low prices have had a tendency to decrease acreage this year, and this, aided by unfavorable seasons, has caused the present short crop, now being marketed, to bring fairly remunerative prices. It is expected

that this crop will bring \$2.50 per sack. The tariff on paddy rice is 1 cent per pound. A sack of rice weighs 162 pounds, the tariff on same is \$1.62, leaving 88 cents per sack to pay freight, commission, insurance, and the growing of the rice in foreign countries.

Louisiana now raises four-fifths of the entire rice crop of the country, and if protected our prairies and alluvial lands will soon produce all the rice now consumed in the United States.

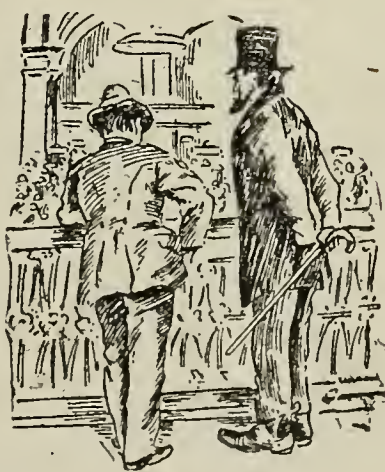
EXPORT WHEAT TRADE OF THE ARGENTINE REPUBLIC.

Mr. S. H. Gastrell, British Consul in Argentina, in a late letter addressed to the foreign office in London, refers to the rapid development of the Argentine Republic from an almost purely pastoral to a cereal producing country. He says that in 1880 this republic imported 177,000 tons of wheat, but in this year, 1893, it has a surplus for export of 1,040,000 tons (about 38,000,000 bushels). In point of fact, Argentina exported during the eight months, Jan. 1 to Aug. 31, 1893, 28,944,000 bushels of wheat. Mr. Gastrell says that, geographically considered, Argentina is remarkably well adapted for the cultivation of cereals, and extensive facilities for transport provided by its railway system render its potentialities as one of the sources of the food supply of Europe a subject of considerable interest.

The area now under cultivation is estimated at 12,500,000 acres; the area suited to cultivation 240,000,000 acres. The distance to ports of shipment from tracts at present under wheat cultivation is usually short. Wheat can be produced and shipped at an exceptionally low cost. This depends very much, Mr. Gastrell says, upon whether the colonist and his family perform the work themselves or have to pay for hired labor. Calculation based upon the average yield of one ton of wheat from $2\frac{1}{2}$ acres, shows that allowing for all expenses of transport, etc., the wheat, if sold in Europe at about 22 shillings per quarter (480 pounds) would return a profit of about 4 shillings and sixpence per quarter.

A few years ago Argentina was not included among the wheat exporting countries. This year its exports will be as large as were those of the United States to Europe, in wheat and flour together, in any year up to 1873. At Rosario, the principal wheat port, there are four large grain elevators which can load ships at the rate of about 50,000 bags a day. At an English milling and baking exhibition in 1892, a gold medal was awarded to Argentine wheat from Alvear colony in Entre Rios. Nine other classes of wheat obtained special honorable mention. The moral of this is that where competition in wheat growing is becoming so keen, farmers who go partly or largely into stock or dairying are making no mistake.

WOULDN'T PAY IT.



Grane Pitt—This is the Stock Exchange, uncle. The seats here sometimes sell for as high as \$20,000. Uncle Silas—Twenty thousand dollars for a seat! Phew! Them fellers down there 'pears to have some sense; most of 'em are standing up.—*Puck*.

Freight on hay, grain, fruit and vegetables on the S. L. S. & E. Railroad in carloads to Seattle, Wash., has been reduced to 10 cents per 100 pounds.

LATE PATENTS

Issued on October 10, 1893.

CONVEYOR BELT.—John B. Adt, Baltimore, Md. (No model.) No. 506,456. Serial No. 468,808. Filed April 3, 1893.

CONVEYING APPARATUS.—James L. Board, Chicago, Ill. (No model.) No. 506,357. Serial No. 451,327. Filed Dec. 10, 1892.

GAS AND AIR ENGINE.—Edward Field, London, Eng. (No model.) No. 506,486. Serial No. 410,955. Filed July 22, 1892.

GRAIN CLEANING AND SEPARATING MACHINE.—James O. King, Harvey, assignor by direct and mesne assignments of three-fourths to Augustus W. L. Hager Triangle and Robert B. Boone, Durham, N. C. (No model.) No. 506,513. Serial No. 472,227. Filed April 28, 1893.

Issued on October 17, 1892.

TRAVELING BALING PRESS.—John Wiebe, San Francisco, Cal. (No model.) No. 506,892. Serial No. 481,892. Filed July 29, 1893.

DRYING FURNACE FOR BREWERS' GRAINS, ETC.—Henry Adams and Hermann Eisert, Baltimore, Md. (No model.) No. 507,085. Serial No. 465,265. Filed March 9, 1893.

GAS ENGINE.—Davis D. Hobbs, Cleveland, O., assignor of three-fourths to Alfred N. Meade and John T. Hobbs, same place. (No model.) No. 506,817. Serial No. 437,815. Filed June 24, 1892.

GRAIN SCREEN.—Joseph Benesh, Racine, Wis., assignor of one-half to W. J. Adams, same place. (No model.) No. 506,657. Serial No. 447,088. Filed Sept. 27, 1892.

HORSE POWER MOTOR.—William E. Mitchell, Merton, Wis. (No model.) No. 506,924. Serial No. 457,906. Filed Jan. 10, 1893.

Issued on October 24, 1893.

CONVEYOR BELT.—Robert Niedergesaeß, Seattle, Wash. (No model.) No. 507,156. Serial No. 426,205. Filed March 24, 1892.

GAS ENGINE.—Carl F. Hirsch and Adam Schilling, San Francisco, Cal. (No model.) No. 507,436. Serial No. 486,031. Filed Aug. 5, 1891.

CONSTRUCTION OF HOPPER BOTTOM GRAIN BINS.—James McDonald and John S. Metcalf, Chicago, Ill., assignors to the Metcalf-McDonald Company, same place. (No model.) No. 507,324. Serial No. 479,590. Filed July 5, 1893.

GRAVITY AND CUT-OFF GRAIN CLEANER AND GRADER.—David J. Davidson, Brockway, assignor of two-thirds to Abraham S. Martin and Stephen G. Martin, Port Huron, Mich. (No model.) No. 507,488. Serial No. 460,385. Filed Jan. 31, 1893.

HAY PRESS.—Frank P. Fowler, Phoenix, Arizona. (No model.) No. 507,425. Serial No. 455,600. Filed Dec. 19, 1892.

HAY PRESS.—Albert G. Wilson, Wolfe City, Tex. (No model.) No. 507,250. Serial No. 455,766. Filed Dec. 20, 1892.

Issued on October 31, 1893.

ROTATING GRAIN WEIGHER.—Jacob R. Johns, Millersburg, Pa., assignor by mesne assignments to the Automatic and Electric Scale Company of New Jersey. (No model.) No. 507,544. Serial No. 411,607. Filed Dec. 22, 1890.

ROTATING GRAIN WEIGHER.—Daniel Drawbaugh, Eberly's Mill, Pa., assignor to the Automatic and Electric Scale Company of New Jersey. (No model.) No. 507,531. Serial No. 442,571. Filed Aug. 9, 1892.

GRAIN SCOURER.—Addison Hancock, Allegheny, Pa. (No model.) No. 507,903. Serial No. 476,494. Filed June 3, 1893.

EXPORTS FROM ATLANTIC PORTS.

The exports of breadstuffs, as compiled by George F. Stone, secretary of the Chicago Board of Trade, from the Atlantic ports during the two weeks ending November 11, as compared with same weeks last year, have been as follows:

	For the week ending Nov. 11. Nov. 12.		For the week ending Nov. 4. Nov. 5.	
	1893.	1892.	1893.	1892.
Wheat, bu.....	970,000	1,956,000	736,000	2,652,000
Corn.....	744,000	930,000	922,000	780,000
Oats.....	117,000	120,000	206,000	600,000
Rye.....	9,000	32,000	.....	79,000
Flour, bbls.....	297,000	220,000	238,000	372,000

DECLINE OF AN OPERATOR ON
'CHANGE.

"Billy" Harrington died at the county hospital. "Billy" was one of the best known beggars in Chicago. For years he had stood around the corners of the Grand Pacific Hotel and the Board of Trade building soliciting alms. His shivering, ill-clad form was a familiar figure to almost every business man who regularly traversed the thoroughfares near the two buildings.

Twenty years ago "Billy" Harrington was a wealthy man. He had a home and a family. He was an operator on the Board of Trade. Then his fortunes reversed. Every deal he made seemed to be on the wrong side. He lost his money and his home. He tried to drown his memory of the past in drink. His family stuck to him a few years, and then, like his home and money, disappeared. Harrington sunk lower and lower. At last he became a common beggar and almost every cent he got was spent for drink.

WHEAT RECEIPTS AT PRIMARY
MARKETS.

The wheat receipts at nine primary markets during the 19 weeks ending November 4, for the three last years, as follows:

	1893.	1892.	1891.
St. Louis.....	9,280,000	19,264,000	17,287,000
Toledo.....	8,427,000	18,604,000	16,121,000
Detroit.....	5,107,000	4,814,000	4,828,000
Kansas City.....	7,537,000	16,014,000	7,427,000
Cincinnati.....	569,000	1,220,000	1,617,000
Winter wheat.....	30,920,000	59,916,000	47,280,000
Chicago.....	11,636,000	34,617,000	29,835,000
Milwaukee.....	5,193,000	7,153,000	4,457,000
Minneapolis.....	21,475,000	26,087,000	22,766,000
Duluth.....	17,604,000	18,734,000	21,091,000
Spring wheat.....	55,908,000	86,591,000	78,149,000
Winter wheat.....	30,920,000	59,916,000	47,280,000
Total, 19 weeks.....	86,828,000	140,507,000	125,429,000

RECEIPTS AND SHIPMENTS AT
PEORIA.

The receipts and shipments of grain and hay at Peoria, Ill., during the 4 weeks ending November 4, as compared with the same period of the preceding year, were, according to R. C. Grier, secretary of the Peoria Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1893.	1892.	1893.	1892.
Wheat, bushels.....	90,000	149,750	52,800	97,600
Corn, bushels.....	1,140,450	777,650	206,750	253,390
Oats, bushels.....	1,789,600	1,360,800	1,661,800	1,448,200
Barley, bushels.....	244,500	172,400	194,500	109,150
Rye, bushels.....	22,200	17,400	6,000	9,650
Spirits & Liquors, bbls.	2,284	399	20,496	28,527
Syrup & Glucose, bbls.	1,564	1,800	24,261	9,800
Hay, tons.....	4,752	4,150	1,030	1,871
Flour, barrels.....	34,900	16,100	24,450	16,875
Mill Feed, tons.....	195	168	2,750	1,029

RECEIPTS AT BUFFALO.

The receipts of grain and flour reduced to wheat at Buffalo, N. Y., during October was greater than for any preceding October, the amount being 31,206,928 bushels, against 25,394,502 during the preceding October. During October 1,506,386 pounds of flour and 23,674,998 bushels of grain were received, against 1,227,851 barrels of flour and 19,255,247 bushels of grain for the preceding October.

The following table shows the receipts at Buffalo during the past 14 years from the opening of navigation to October 31:

	Flour, Barrels.	All Grain, Bushels.	Flour and Grain, Bu.
1893.....	7,765,378	114,169,127	152,996,017
1892.....	7,802,296	111,601,859	150,613,349
1891.....	5,265,921	93,707,387	126,036,992
1890.....	4,831,543	77,072,003	101,229,718
1889.....	3,749,569	76,244,493	94,992,338
1888.....	4,111,694	64,688,581	85,247,057
1887.....	3,230,935	72,181,886	88,336,561
1886.....	3,657,726	63,856,658	82,245,283
1885.....	2,174,318	43,797,668	54,669,258
1884.....	2,094,781	48,515,835	58,989,740
1883.....	1,783,163	59,093,669	68,009,484
1882.....	1,585,299	42,641,606	50,568,101
1881.....	851,838	51,773,450	56,032,640
1880.....	1,101,669	92,790,639	99,298,984

RECEIPTS AND SHIPMENTS AT
MILWAUKEE.

The receipts and shipments of grain and hay at Milwaukee, Wis., during the 4 weeks ending November 4, as compared with the same period of the preceding year, were, according to Wm. J. Langson, secretary of the Milwaukee Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1893.	1892.	1893.	1892.
Wheat, bushels.....	1,687,550	1,898,350	631,500	348,800
Corn, bushels.....	161,200	72,500	28,150	22,820
Oats, bushels.....	747,000	694,000	750,925	540,496
Barley, bushels.....	3,413,818	2,073,867	1,993,891	1,440,936
Rye, bushels.....	126,000	367,886	101,200	269,354
Grass seed, pounds...	1,072,581	65,330	413,426	131,370
Flaxseed, bushels.....	119,173	71,520	.....	63,560
Hay, tons.....	1,048	797	258	.....
Flour, barrels.....	110,176	254,965	204,888	379,583

RECEIPTS AND SHIPMENTS AT
DETROIT.

The receipts and shipments of grain and hay at Detroit, Mich., during the 4 weeks ending November 4, as compared with the same period of the preceding year, were, according to Geo. M. Lane, secretary of the Detroit Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1893.	1892.	1893.	1892.
Wheat, bushels.....	993,395	1,135,323	888,430	804,812
Corn, bushels.....	95,378	166,698	30,734	100,154
Oats, bushels.....	159,388	207,026	15,285	52,562
Barley, bushels.....	58,293	195,801	2,636	46,175
Rye, bushels.....	6,102	49,353	8,243	54,167
Flour, barrels.....	16,058	24,276	13,290	22,486

RECEIPTS AND SHIPMENTS AT
BUFFALO.

The receipts and shipments of grain and hay at Buffalo, N. Y., during the month of October, as compared with the same period of the preceding year, were, according to Wm. Thurstone, secretary of the Buffalo Merchants' Exchange, as follows:

Articles.	Receipts by Lake.		Shipments by Canal.	
	1893.	1892.	1893.	1892.
Wheat, bushels...	11,902,982	10,593,177	4,754,250	3,226,739
Corn, bushels....	8,153,346	5,214,329	1,780,640	1,728,461
Oats, bushels....	3,745,398	2,031,764	274,515	153,728
Barley, bushels...	1,703,664	1,456,822	563,160	484,505
Rye, bushels.....	23,000	348,176	24,930	74,500
Seed, bags.....	6,246	9,840	.....	Not repta
Flaxseed, bushels.	1,661,673	860,116	*21,482,929	*22,228,468
Flour, barrels....	1,538,815	1,331,888	257	1,000

*Quoted in pounds.

RECEIPTS AND SHIPMENTS AT
MINNEAPOLIS.

The receipts and shipments of grain and hay at Minneapolis, Minn., during the 4 weeks ending November 4, as compared with the same period of the preceding year, were, according to G. D. Rogers, secretary of the Minneapolis Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1893.	1892.	1893.	1892.
Wheat, bushels.....	8,113,280	9,719,190	1,033,420	1,113,840
Corn, bushels.....	136,910	137,080	14,300	9,390
Oats, bushels.....	386,090	471,920	249,580	274,430
Barley, bushels.....	586,220	442,940	478,510	297,960
Rye, bushels.....	30,140	41,980	7,440	34,870
Flaxseed, bushels...	292,120	237,340	235,796	37,310
Hay, tons.....	3,700	3,868	110	105
Flour, barrels.....	20,398	23,959	791,631	868,853

CROP OF LEADING CORN PRODUC-
ING STATES.

The report of the Department of Agriculture shows the estimated yield of the seven principal corn producing states this year to be as follows:

States.	1893.		1892.	
	Acres.	Yield, bu.	Acres.	Yield, bu.
Ohio.....	2,824,000	68,614,000	2,852,000	83,853,000
Indiana...	3,633,000	88,271,000	3,527,000	103,334,000
Illinois...	6,626,000	168,956,000	6,310,000	165,327,000
Iowa.....	7,428,000	262,942,000	7,075,000	200,221,000
Missouri...	5,670,000	155,930,000	5,505,000	152,489,000
Kansas...	6,547,000	132,911,000	5,952,000	145,825,000
Nebraska...	6,241,000	156,031,000	5,573,000	157,145,000
Total...	38,969,000	1,033,655,000	36,794,000	1,008,194,000
Total U.S.	72,957,000	1,648,837,000	70,626,000	1,628,464,000

RECEIPTS AND SHIPMENTS AT
TORONTO.

The receipts and shipments of grain and hay at Toronto, Ont., during the four weeks ending November 4, as compared with the same period of the preceding year, were, according to Edgar A. Wills, secretary of the Toronto Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1893.	1892.	1893.	1892.
Wheat, bushels.....	19,937	.....	.....	.....
Corn, bushels.....	25,460	.....	.....	.....
Oats, bushels.....	43,505	.....	.....	.....
Barley, bushels.....	4,449	.....	.....	.....
Hay, tons.....	.....	.....	.....	.....
Flour, barrels.....	1,446	.....	.....	.....

FLAXSEED AT CHICAGO.

The monthly receipts and shipments of flaxseed at Chicago during the past 21 months, as reported by S. H. Stevens, flaxseed inspector of the Board of Trade, were as follows:

Months.	Receipts.		Shipments.	
	1893.	1892.	1893.	1892.
January.....	396,550	782,650	323,261	296,355
February.....	187,550	556,050	232,555	200,884
March.....	367,950	592,900	333,257	223,395
April.....	232,650	547,800	660,506	702,589
May.....	190,300	309,650	401,359	743,930
June.....	86,900	563,750	448,742	577,002
July.....	140,800	612,700	250,091	806,375
August.....	414,700	729,300	341,606	1,009,113
September.....	1,881,550	761,750	1,195,733	974,668
October.....	2,340,800	1,452,000	1,810,110	1,150,685
November.....	.....	1,395,350	.....	1,365,880
December.....	.....	743,050	.....	228,060
Total.....	6,239,750	9,046,950	5,997,220	8,278,936

RECEIPTS AND SHIPMENTS AT
KANSAS CITY.

The receipts and shipments of grain and hay at Kansas City, Mo., during the 4 weeks ending November 4, as compared with the same period of the preceding year, were, according to W. D. Charde, secretary of the Commercial Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1893.	1892.	1893.	1892.
Wheat, bushels ..	1,936,800	4,067,400	.....	.....
Corn, bushels....	972,400	482,950	.....	.....
Oats, bushels....	525,000	278,000	.....	.....
Rye, bushels.....	345,600	133,800	.....	.....
Flaxseed, bushels	.....	.....	.....	.....
Hay, tons.....	5,760	4,200	.....	.....
Bran.....	.....	.....	.....	.....

RECEIPTS AND SHIPMENTS AT
ST. LOUIS.

The receipts and shipments of grain and hay at St. Louis, Mo., during the month of October, as compared with the same period of the preceding year, were, according to Geo. H. Morgan, secretary of the St. Louis Merchants' Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1893.	1892.	1893.	1892.
Wheat, bushels.....	1,749,498	3,877,042	260,437	1,402,907
Corn, bushels.....	1,970,448	1,411,140	1,557,554	837,412
Oats, bushels.....	1,251,944	1,129,226	471,457	519,904
Barley, bushels.....	493,620	541,406	19,528	21,505
Rye, bushels.....	37,100	259,336	27,348	266,721
Hay, tons.....	14,100	15,324	2,486	3,904
Flour, barrels.....	99,175	150,446	179,995	255,025
Bran, ears.....	79	110	173	102
Bran, sacks.....	53,089	18,420	82,232	72,083

RECEIPTS AND SHIPMENTS AT
TOLEDO.

The receipts and shipments of grain and hay at Toledo, O., during the 4 weeks ending November 4, as compared with the same period of the preceding year, were, according to Denison B. Smith, secretary of the Produce Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1893.	1892.	1893.	1892.
Wheat, bushels.....	1,375,200	2,170,000	889,600	1,497,400
Corn, bushels.....	417,200	400,900	460,900	455,300
Oats, bushels.....	38,200	18,700	13,100	5,000
Barley, bushels.....	.....	6,100	.....	4,100
Rye, bushels.....	23,200	58,900	9,600	90,900
Flour, barrels.....	8,051	10,900	109,232	118,629

RANGE OF PRICES AT CHICAGO.

The daily range of prices for cash grain at Chicago since October 16 has been as follows:

October.	NO. 2 RED NO. 2 SFG W. WHT. WHEAT.		NO. 2 OORN.		NO. 2 OATS.		RYE.		BARLEY.		FLAX SEED	
	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.
16....	60 1/4	61 1/4	60 1/4	61 1/4	37 1/4	37 1/4	26 1/4	42	57	57	102	103
17....	61	62	61	62 1/4	37 1/4	37 1/4	26 1/4	42	58	58	102	102 1/4
18....	62	62 1/4	61 1/4	62 1/4	38 1/4	38 1/4	27 1/4	42	57	58	102 1/4	103
19....	62 1/4	63	61 1/4	62 1/4	38 1/4	39	28	43	58	59	102	102 1/4
20....	62 1/4	63 1/4	62 1/4	63 1/4	38 1/4	39 1/4	28	43 1/2	58 1/2	59	101 1/2	102
21....	62 1/4	63	62	62	37 1/4	38 1/4	27 1/4	43 1/2	55	55	100	101 1/4
22....	62	63	61	62 1/4	37 1/4	38	27 1/4	43 1/2	55	55	99 1/4	101 1/4
23....	61 1/4	62 1/4	61 1/4	62 1/4	37 1/4	37 1/4	27 1/4	43 1/2	55	55	99 1/4	101
24....	61 1/4	62 1/4	61 1/4	62 1/4	37 1/4	37 1/4	27 1/4	43 1/2	55	55	99 1/4	101
25....	61 1/4	62 1/4	61 1/4	62 1/4	37 1/4	37 1/4	27 1/4	43 1/2	55	55	99 1/4	101
26....	61 1/4	62 1/4	61 1/4	62 1/4	37 1/4	37 1/4	27 1/4	43 1/2	55	55	99 1/4	101
27....	61 1/4	62 1/4	61 1/4	62 1/4	37 1/4	37 1/4	27 1/4	43 1/2	55	55	99 1/4	101
28....	61 1/4	62 1/4	61 1/4	62 1/4	37 1/4	37 1/4	27 1/4	43 1/2	55	55	99 1/4	101
29....	61 1/4	62 1/4	61 1/4	62 1/4	37 1/4	37 1/4	27 1/4	43 1/2	55	55	99 1/4	101
30....	61 1/4	62 1/4	61 1/4	62 1/4	37 1/4	37 1/4	27 1/4	43 1/2	55	55	99 1/4	101
31....	61 1/4	62 1/4	61 1/4	62 1/4	37 1/4	37 1/4	27 1/4	43 1/2	55	55	99 1/4	101

* Columbus Day at World's Fair.
† Funeral of Mayor Harrison.
• Election Day.

For week ending October 21, prime contract timothy sold at \$3.25@3.62 per cental; prime contract clover at \$8.90@10.50; Hungarian at \$0.85@1.00; German millet at \$0.60@1.00; buckwheat at \$0.90@1.60 per 100 pounds. No. 1 flax on track sold at \$1.01 1/2@1.09 1/2. The receipts of hay for the week were 7,666 tons, against 5,413 tons for the previous week. Shipments for the week were 1,717 tons, against 1,260 tons for the previous week. Only a moderate business in timothy hay was transacted. Inquiry for shipment very light. There was a fair demand for shipment East, and prices ruled steady. Sales of No. 1 timothy ranged at \$11.00@12.00; No. 2, \$9.50@10.50; mixed, \$7.50@10.00; not graded, \$7.00 for heating, \$8.00@10.75 for fair to choice; Illinois upland prairie, \$5.00@7.75; Indiana, \$6.50; Kansas, \$8.50@9.00; Iowa, \$6.00@6.50 for heating, and \$7.00@8.75 for fair to choice; No. 1 prairie, \$6.00; packing hay, \$4.50. Wheat straw sold at \$4.75@5.00. Oat straw at \$5.00, and rye straw at \$7.00@8.00.

For week ending October 28 prime contract timothy sold at \$3.20@3.67 per cental; prime contract clover at \$8.65@11.07 1/2; Hungarian at \$0.75@1.00; German millet at \$0.60@1.10; buckwheat at \$0.85@1.60 per 100 pounds. No. 1 flax on track sold at \$0.99@1.11. The receipts of hay for the week were 8,180 tons, against 7,666 tons for the previous week. Shipments for the week were 2,541 tons, against 1,717 tons for the previous week. Prices for timothy hay exhibited no material change. A light inquiry existed for shipment East, principally for prime hay, and said to be for export. The arrivals were heavy and demand only moderate. Sales of No. 1 timothy ranged at \$11.00@12.00; No. 2, \$9.50@11.00; mixed, \$8.50@10.00; not graded, \$9.50@10.50; threshed, \$8.00; Illinois upland prairie, \$5.50@6.50; Indiana, \$5.00@7.00; Kansas, \$8.75; Iowa, \$5.50@6.50 for damaged and coarse, \$7.00@7.75 for fair to good, and \$8.00@8.75 for choice to fancy; No. 1 prairie, \$6.00; packing hay, \$5.50. Wheat straw sold at \$4.50@5.00; rye straw at \$7.50@8.00.

For week ending Nov. 4 prime contract timothy sold at \$3.20@4.00 per cental; prime contract clover at \$8.75@12.00; Hungarian at \$0.75@1.15; German millet at \$0.60@1.10; buckwheat at \$0.90@1.45 per 100 pounds. No. 1 flax on track sold at \$0.99@1.11. The receipts of hay for the week were 7,125 tons, against 8,180 tons for the previous week. Shipments for the week were 1,693 tons, against 2,541 tons for the previous week. A rather light business was transacted in timothy hay. The offerings were small and demand was also restricted. Demand for shipment not so good as in the previous week. Prices ruled steady during early part of the week, and a shade higher toward the close. Sales of No. 1 timothy ranged at \$10.50@11.25; No. 2, \$9.50@10.00; mixed, \$8.00@9.25; not graded, \$7.50 for poor, and \$9.50@10.50 for good to choice; threshed, \$6.00; Illinois upland prairie, \$5.50@6.50; Indiana, \$6.25@6.50; Iowa, \$6.00 for damaged, \$7.00@8.75 for poor to fancy; No. 1 prairie, \$6.00; packing hay, \$4.25@5.50. Wheat straw sold at \$4.00; oat straw at \$5.00, and rye straw at \$7.00@7.75.

For week ending Nov. 11 prime contract timothy sold at \$3.20@4.11 per cental; prime contract clover at \$9.00@12.32 1/2; Hungarian at \$0.75@1.15; German millet at \$0.60@1.10; buckwheat at \$0.90@1.50 per 100 pounds. No. 1 flax on track sold at \$1.01@1.10. The

receipts of hay for the week were 6,921 tons, against 7,125 tons the previous week. Shipments for the week were 1,619 tons, against 1,693 tons for the previous week. The market for timothy hay ruled dull during the week. Demand light, and arrivals only fair. The demand for prairie hay during the early part of the week good, and later less urgent and the market became dull. Sales on No. 1 timothy ranged at \$10.00@11.00; mixed, \$7.00@7.50; not graded, \$7.00@10.00; Illinois upland prairie, \$6.25@7.00; Indiana, \$6.00@6.50; Kansas, \$9.00 for choice; Minnesota, \$8.00; Iowa, \$7.00@9.00 for fair to fancy; No. 1 prairie, \$6.00. Packing hay, \$4.50@5.00; Wheat straw sold at \$1.00@4.50, and rye straw at \$6.50@7.00.

VISIBLE SUPPLY OF GRAIN.

The following table shows the visible supply of grain Saturday, November 11, 1893, as compiled by George F. Stone, secretary of the Chicago Board of Trade:

In Store at	Wheat, bu.	Corn, bu.	Oats, bu.	Rye, bu.	Barley, bu.
Albany.....	50,000	100,000	6,000	10,000	
Baltimore.....	1,266,000	324,000	229,000	46,000	
Boston.....	928 0 0	284 0 0	13,000		20,000
Buffalo.....	2,239 0 0	733 0 0	616,000	35,000	810,000
do afloat.....					
*Chicago.....	18,916 000	1,958 000	758,000	237,000	121,000
do afloat.....					
Cincinnati.....	10,000	26,000	52,000	19 000	101,000
Detroit.....	1,241,000	10,000	23,000	2,000	59,000
do afloat.....					
Duluth.....	6,796,000			12,000	129,000
do afloat.....					
Indianapolis.....	243,000	36,000	75,000	2,000	
Kansas City.....	463,000	23,000	34,000	9,000	
Milwaukee.....	834,000		14,000	33,000	264,000
do afloat.....					
Minneapolis.....	9,659,000	7,000	18,000	1,000	208,000
Montreal.....	655,000	2,000	83,000	37,000	47,000
New York.....	18,295,000	538,000	1,668,000	62,000	10,000
do afloat.....	113 000	184 000	15,000	8,000	140,000
Oswego.....	22,000	98,000			150,000
Peoria.....	119,000	121,000	150,000	2,000	1,000
Philadelphia.....	580,000	470,000	190,000		
St. Louis.....	5,547,000	87,000	128,000	4,000	31,000
do afloat.....	107 000				
Toledo.....	2,107,000	254,000	28,000	14,000	
Toronto.....	98,000		1,000		29,000
On Canals.....	2,336,000	739,000	128,000	17,000	435 0 0
On Lakes.....	1,406,000	2,074,000	401,000	20,000	645,000
On Miss. River.....	72,000	20,000	22 000		
Grand total.....	74,052,000	8,041,000	4,746,000	566,000	3,210,000
Same date last year.....	67,203,000	13,113,000	8,195,000	1,269,000	2,762,000

*Estimated from the best data available in advance of official figures.

INSPECTED RECEIPTS AT CHICAGO.

According to the report of Chief Grain Inspector George P. Bunker the grain received at Chicago during the month of July was graded as follows:

WINTER WHEAT.

Railroad.	White.			Hard.			Red.			No Grade.
	2	3	4	1	2	3	1	2	3	
C. B. & Q.....	1	1		29	137		16	114	66	4
C. R. I. & P.....	2	1		18	106		57	95	25	4
C. & A.....		1		13	20		3	90	46	6
Illinois Central.....		1		5	11		19	142	21	3
Freeport Div.....				1	19			1	2	
Galena Div. N. W.....				21	30			1	2	
Wis. Div., N. W.....							3	7	1	
Wabash.....	1				2		15	86	49	
C. & E. I.....	1						19	67	7	11
C. M. & St. P.....	4	1		2	10		1	49	2	
Wis. Cent.....										
C. Gr. Western.....	2	4		16	21		121	81	19	2
A. T. & S. Fe.....		1		27	1018		66	28	16	3
Through & Spec.....				1	398		152	130	13	3
Total each grade.....	11	10		133	1772		472	891	269	36
Total W. wheat.....										3,595

SPRING WHEAT.

Railroads.	Northern.	2			No Grade.	White.			Mixed Wheat.
		2	3	4		2	3	2 3	
C. B. & Q.....		58	96	27	3		6		
C. R. I. & P.....			83	6	1		2		
C. & A.....									
Illinois Central.....									
Freeport Div.....			15	3	2				
Galena Div. N. W.....		47	368	76	1	1	2		
Wis. Div., N. W.....			30	3					
Wabash.....									
C. & E. I.....									
C. M. & St. P.....		74	862	9					1
Wis. Cent.....									
C. Gr. Western.....		1	20	11					
A. T. & S. Fe.....									
Through & Special.....		1	2						
Total each grade.....		181	1476	135	7	1	10		1
Total sp. wheat.....									1811

CORN.

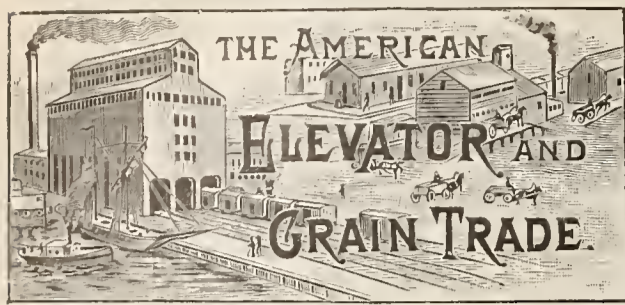
Railroad.	Yellow.		White.		2	3	4	No Grade.
	2	3	2	3				
C. B. & Q.....	688	147	59	31	1,596	716	148	4
C. R. I. & P.....	279	82	21	16	1,062	501	57	1
C. & A.....	343	98	102	22	367	124	31	6
Illinois Cent.....	860	163	204	121	498	120	66	4
Freeport Div.....	122	61	19	20	169	82	36	
Gal. Div. N. W.....	339	154	38	12	540	382	131	12
Wis. Div. N. W.....	3	3				1	1	
Wabash.....	299	125	79	76	117	96	80	1
C. & E. I.....	30	45	14	43	78	67	10	
C. M. & St. P.....	256	58	28	6	880	180	28	
Wis. Cent.....								
C. Gr. Western.....	87	21	3	4	156	69	42	3
A. T. & S. Fe.....	281	62	25	8	556	200	31	
Through & Spec.....	15	3	3		5	1	2	1
Total each grade.....	3,602	1,022	595	359	6,024	2,539	663	32
Total corn.....								14,836

OATS.

Railroad.	White.			2	3	White Clipped.		No G'de
	1	2	3			1	2	
C. B. & Q.....		364	300	133	66			2
C. R. I. & P.....		164	529	69	86			7
C. & A.....		83	10	79	13			17
Illinois Central.....		161	73	306	17			5
Freeport Div.....		64	482	39	92			2
Galena Div. N. W.....		212	1,182	74	90			6
Wis. Div. N. W.....		43	60	8	21			1
Wabash.....		101	13	115	9			
C. & E. I.....		67	8	129				
C. M. & St. P.....		226	709	76	152			2
Wisconsin Central.....			1					
C. Gr. Western.....		30	116	26	49			1
A. T. & S. Fe.....		117	20	47	7			
Through & Special.....		46	17	41	13			1
Total each grade.....		1,678	3,520	1,142	615			8
Total oats.....								7,005

RYE.

Railroad.	1			2	3	No Grade.
	1	2	3			
C. B. & Q.....				24	8	



PUBLISHED ON THE FIFTEENTH OF EACH MONTH BY

MITCHELL BROS. COMPANY

(INCORPORATED.)

OFFICE:

Howland Block, 184 and 186 Dearborn St.,
CHICAGO, ILL.

Subscription Price, - - - \$1.00 per Year.

English and Foreign Subscription, - - 1.50 " "

English and Foreign Subscriptions may be sent to W. H. Smith & Son, 186 Strand, London, W. C., Eng.

A. J. MITCHELL, - - - Business Manager.

HARLEY B. MITCHELL, - - - Editor.

ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., NOVEMBER 15, 1893.

A NEW PHASE OF FOREIGN COMPETITION.

The effect of foreign competition in lowering the prices of American grain is not appreciated either by the grower of the grain or to any great extent by the handlers, excepting the exporters, for the reason that the competition takes place on a field far removed from the scene of production. In a general way people know that we cannot have high prices for grain here with low prices for it ruling in Liverpool and London; but they do not appreciate that the competition of Russia, India and Roumania in neutral markets is as efficient a factor of prices as competition is in our own markets in other fields. Of course there are modifying circumstances; but so long as we produce a large surplus of grain the price of the surplus will make the price for the home consumptive demand.

But if we, as a people, largely disregard foreign competition in our own grain trade, we may rest assured that the competing foreign countries are not disregarding us. They understand that we are and will continue to be the chief factor in the consuming markets of Western Europe. And we may add that they are taking our measure as to agricultural resources and our methods of handling grain. During the past summer and fall representatives of four European Governments have been in Chicago on missions connected with the grain trade. They want to adopt whatever is good in our elevator system, our system of inspection and our methods of speculative dealing. In every instance these representatives were men of high attainments, thoroughly competent to put in practice at home whatever they might find here admirably and worthy of adoption.

We note this fact simply to show that the countries competing with us in Western Europe are not unmindful of the fact of competition in common markets and propose to equip themselves to meet us as successfully as possible. Roumania, for instance, stands ready to profit by our corn propaganda, for Roumania produces

corn in abundance. Russia is making every effort to transport and handle her wheat by a system of railroad and terminal elevators. We cannot prevent these efforts of competitors to market their product as cheaply as possible; but we must not blind our eyes to them as price making factors on our own grain.

CARRIERS MUST GIVE EQUAL PRIVILEGES TO SHIPPERS.

A very important decision has been rendered recently by the Supreme Court of Minnesota in the case of the Farwell Farmers' Warehouse Association against the Minneapolis, St. Paul & Sault Ste. Marie Railway Company. This was an action brought by the association to recover damages for refusal of the railway company to run a side track to its warehouse. The association, having erected a warehouse adjacent to the right of way of the railway company in the village of Farwell, demanded of the railway company that it construct a side track to the same on its right of way, to enable it to ship grain received and stored therein; and upon the refusal of its request complaint was made to the Railroad and Warehouse Commission. An investigation was had thereon by the commission, in pursuance of the statute, resulting in the granting of the petition.

The gist of the complaint, which has been adopted and affirmed, first by the District Court and now in the Supreme Court, is that the railway company refused to grant the association the same privileges or equal facilities for the shipment of grain which it conceded to other warehousemen at the same station, thereby unlawfully discriminating against this association. It is also to be noted that in the first place, after incorporation and organization, the association made an application in writing to the railway company for a site or location on which to erect a grain warehouse in which to transact its business on the railway company's right of way at that station, and alongside of its track, which was unconditionally refused. Then the association obtained by purchase a site for a grain house adjacent to the right of way, and as near as practicable to the station building and side track of the railway company, where it constructed a grain warehouse with necessary equipment for storing and shipping grain. This warehouse is 55 feet from the main track of the railway.

When this had been done the demand was made for a side track or spur track which should connect by rail the warehouse with the railway company's main line or side track, which could be constructed so that no part thereof would be off of the company's right of way. Other persons or associations, it was alleged, were given the privileges which were denied to this company. The cost to the association of transferring by wagon the grain offered by it for transportation at the time the damages were computed was over \$600, which it was awarded as damages.

The Supreme Court says that railway corporations are quasi public corporations and enjoy privileges and franchises granted by the state in consideration of the general benefits which the public may be expected to derive from the operations of the roads. They must, therefore, subject to certain necessary and proper limitations, which the law will recognize, be operated so as to reasonably accommodate the business and subserve the best interests of the public. One of the most important of these interests in an agricultural community is the marketing and transportation of grain; and the price may in any particular case be affected to a greater or less extent by the facilities for transportation afforded, and the opportunity for competition by buyers. It is undoubtedly a subject proper for legislative cognizance. It is an essential condition to the right of eminent domain by a railroad corporation that all the people should have

the right to use the road on equal terms; and it is the policy of the law not to permit such corporations to grant special privileges to any persons which are denied to others under like conditions. This is declared by the Minnesota statute of 1887, which requires the railway company to give equal or substantially similar facilities for the transportation of grain to all persons who in good faith erect or desire to erect warehouses at any of its stations.

It was not claimed by the association that it had an absolute right to occupy the railway company's right of way, or to demand a site for a warehouse thereon. The railway company was not obliged to grant such concession on its right of way. What was contended for and what is decided in the case is that under the above law, if it granted these privileges to others, it could not refuse the same or substantially similar ones to this particular association; and it cannot complain after having refused this association a site on its right of way, similar to that granted to others, that the association should accept a site adjacent thereto and demand a side track for its accommodation in order to afford substantially similar facilities to the association for handling grain to those granted to others at the same station. Undoubtedly a railway company may impose reasonable conditions and terms upon persons who demand trackage for warehouses for the transportation of grain, but they must be the same for all.

PROMPT DELIVERY OF GRAIN NEEDED.

The old cry of car famine which was so painfully familiar to grain shippers of the Mississippi valley last season has been revived, and shippers at many points in the Northwest have been complaining bitterly of having their grain delayed by carriers refusing to give cars for shipment.

The light receipts at Duluth, Superior and Minneapolis show that the car famine exists only in the desires of the traffic managers. It is a mere ruse to delay grain until after the close of navigation. Then they will get to haul the wheat or its products much farther. There has been no excuse whatever for scarcity of cars claimed. The traffic managers saw an opportunity to take advantage of the shippers on their lines and as usual did so. The shippers may have kicked a little, but that never dissuades a railroad man from gaining his point.

Shippers have the remedy in their own hands, and until they join forces and call a halt upon carriers they must expect a delay in shipments whenever it is to the advantage of carriers to delay them.

A suit at law against a powerful defendant is always tedious, wearisome and expensive, but the delays of grain in transit and at point of shipment is doubly so, and what is more, never end while lawsuits always have an ending.

One was ended in Arkansas by the Supreme Court of that state last year, and much to the discomfiture of the carrier involved. The court held that "whenever a common carrier wrongfully refuses to accept a commodity for transportation the shipper cannot abandon it to the ravages of weather at the carrier's expense, the shipper being bound to properly protect it, and the carrier being liable for the reasonable expenses therefor, together with proximate damages for delay. A recital in a bill of lading that the goods were received by the carrier in apparent good order refers only to the external condition of the goods, and as between the original parties is only prima facie proof of the true condition of the goods when received. A common carrier is liable for damages accruing to goods received for shipment from the time they are received, and not from the date of the bill of lading only."

Similar decisions have been rendered by the courts of other states, and we doubt not that

any court would grant a judgment for storage and loss occasioned by delay of grain at initial point if the case was properly presented and backed with reliable evidence. In return for concessions by the state the railroad company is supposed to furnish shipping facilities without discrimination to all who apply. Competing points are not entitled to any better service than other points. Where prompt service is not given a suit at law will show whether carrier is using right of way for the purpose it was granted or not. If it does not propose to furnish shipping facilities to all who apply then its charter will be annulled. Prompt delivery of grain will never be secured until shippers combine to seek to secure damages for delay in the courts.

"A NOVEL PROPOSITION."

It comes to us from David Lubin of Sacramento, Cal., in the form of a pamphlet, and it proposes to revolutionize the distribution of wealth by moving farm products as mail matter at a uniform rate for all distances. The author defends his proposition with a considerable skill, but he fails, in our estimation, to show why the government should, by its act, add to the value of land in one part of the country by subtracting from it another. Yet that is the essence of the proposition. It means that the man 1,500 miles from market have this disadvantage removed by the government so that he be placed in the same relation thereto as the man, say a dozen miles from market. In other words, he proposes that government tax the whole people to compensate some people for their local disadvantages. It is surprising how the idea of confiscation runs through so many schemes of alleged reform. It is disguised in Mr. Lubin's scheme; but he just as surely confiscates advantages of location which some have, as the socialist proposes to "nationalize" industry. All such schemes are off the same cloth. They one and all propose to benefit some portion of the people by depriving others of what they have earned, by taxation or some other scheme. Reforms are revolutions that proceed on any such basis.

GOOD COUNTRY ROADS.

The agitation for the improvement of our country roads has declined, although the need for improvement still exists. The movement, which was conducted with great earnestness for several years, was not without good results in all parts of the country, but the excellent roads desired are not yet in sight. Many have learned of the luxuries the old world has in this line and how their roads are constructed, but few miles of good roads have been constructed in this country as the result of this information.

The work of education and agitation should not be dropped. We need roads that can be traversed easily and in all kinds of weather. Roads that will reduce the cost of marketing produce to the farmer, and encourage him to market it whenever a rise in prices shows an increased demand. At present the farmers are often debarred from taking grain to market by impassible roads, so the majority of them take the cost of marketing into consideration as well as the ruling prices. If they knew that the roads would be good throughout the year they would not rush grain to market immediately after harvest, flood the central warehouses and depress prices. Nor is it likely that they would market grain faster than the local elevator men could take care of it, which would strike despair to the irregular buyers.

The producer could afford to sell his grain for a less price and still obtain a profit, because the cost of taking to market would be materially reduced. He would market much grain which he now allows to go to waste, for with good roads he could take 100 bushels to market every time he had occasion to go to town. The

dealers would have more grain to handle and we would have more grain to export at a fair price. Stagnation and rush of the extreme degrees now frequently experienced would be unknown, and the champions of good roads would receive the blessings of the regular country dealers.

HIGH BIDDING IN COUNTRY MARKETS.

High bidding in country markets has always been a curse to the country grain dealer, and try as hard as he can he seems unable to overcome the evil. Competitors in nearby markets will pay a high price for several loads probably of superior quality and that starts the rumor that that price is ruling in that market.

The farmers who hear of the price kick for the same price in nearby markets, and sometimes get it. When they do not they kick to the merchants and the merchants get after the grain dealer. The merchants care not what grain is worth or what the buyer will be able to sell it for, what they want and always selfishly insist upon is that the buyer shall pay prices equal to any paid in nearby towns. They want trade and care not a snap whether the buyer makes a living or not.

Sometimes a small market is burdened with more dealers than there is business to support, then their wild overbidding draws trade from far and near and the sheriff soon takes control of an old established business.

All dealers are ever anxious to get business, but few of them are in it for their health, and many of them have had nerve enough to refuse to grant the unreasonable demands of farmers and merchants.

In a number of places this has been the means of calling the attention of the merchants to the fact that the country buyer cannot add a profit to the buying price and sell his grain whenever he offers it. He must pay a price that will insure him a profit. Lately the merchants of a number of towns have shown a disposition to assist buyers in maintaining prices at the top notch. Some buyers are given a yearly bonus outright, and others a cent a bushel for all grain bought. Still others take in exchange for goods the buyers checks made out for 2 or 3 cents a bushel in excess of what he can afford to pay. This excess is refunded to the buyer by the merchant who adds it onto the price of his goods sold to the farmer. This has not stopped overbidding, but it has decreased it and checked the complaints formerly entered by merchants and producers, and in many cases given the buyer relief from outside competition.

FIGHT FOR A SITE.

The right of the railroad company to decide who shall and who shall not erect elevators on its right of way has been called into question again in South Dakota, and the prospects are that the case will be taken into the courts and decided.

The C., M. & St. P. Ry. refused John McAllen a site for an elevator at Bristol, so he appealed to the state railroad commissioners and they granted him a site. McAllen commenced to build, and the railroad company interfered by placing a number of box cars in the way. After removing the cars McAllen was sued for trespass, and the building which he erected was removed from the right of way in small pieces by employees of the railroad company.

The railroad company claims that the law providing for the condemnation of elevator sites on railroad rights of way is unconstitutional, because it conflicts with that part of the constitution which provides that private property shall not be taken for public use without just compensation, to be determined by a jury. As the courts consider and treat railroad companies as quasi-public corporations, they

may fail in attempting to find relief behind this clause.

It is as unreasonable in shippers to expect a railroad company to grant sites for a number of unneeded houses, as for a railroad company to refuse a site at a point where the grain handling facilities are lacking or insufficient to meet the needs of the business. Both sides are entirely too radical in the matter. Each must make concessions before an equitable adjustment of the matter can be secured. The hot-headed farmers about Bristol have already locked arms, and propose to erect an elevator upon the disputed site, whether the railroad company is willing or not. More time, money and energy will be wasted and in the end no house will be upon the site. Other tactics must be followed to secure its maintenance upon the railroad right of way.

WATER TRANSPORTATION FOR GRAIN.

The receipts of grain and flour at Buffalo during October were nearly 6,000,000 bushels in excess of the receipts of any preceding October, and the railroad elevator pool has had its usual opportunity to cause a blockade in that port and delay grain shipments until the Erie Canal and lakes are closed to navigation, then the grain must be shipped by rail. It is the continuation of the old fight of the railroads against the waterways.

The Erie Canal has carried more grain this season than for several years, and last Monday more grain was cleared than in any preceding day in the history of the canal. The canal boatmen have had a prosperous year, and will fight hard to have the New York legislature appropriate money to improve the canal. With longer locks, ten feet of water and electricity to propel the boats of grain will be taken from Western lake ports to New York harbor quicker and cheaper by water than the railroads can ever hope to do it.

At present grain is taken as far as Buffalo in less than one-half the time the railroads require to do it. With ten feet of water instead of six in the Erie Canal the boats can take much larger loads at the same expense. With longer locks, and electricity instead of mules the grain will be delivered in New York much quicker, and the supremacy of New York City will be continued. If improvements are not made in the Erie and facilities are not provided at Buffalo for quickly transferring grain to canal boats at the same price as to cars, the trade will surely find it more advantageous to patronize the St. Lawrence and Mississippi River routes.

The St. Lawrence route is being improved by the deepening of canals, the construction of new storage and transfer elevators, and this year Montreal received more grain than ever before. The time is not far distant when this route will be prepared to handle a large quantity of grain at small cost, and it will surely make a fight for the business.

The Mississippi route is also being improved, and new elevators have recently been constructed at New Orleans and at other points along the river, so it promises to be a more potent factor in the grain carrying trade.

Fierce competition in foreign markets will compel us to seek the cheapest route to these markets. Sentiment can not and will not be considered. If the new routes provide ample facilities for handling the trade they will get the bulk of it unless the old route is improved and sincere efforts made to retain the trade.

The annual meeting of the National Transportation Association is being held in Baltimore to-day. It will be remembered that this association was organized several years ago, when the railroad companies attempted to force an obnoxious bill of lading upon the shippers. It did good work then, but has done little since.

EDITORIAL MENTION

IS THERE a prophet among our subscribers? If so he should fill out the guessing ticket and get the prize.

At last the great Manchester Ship Canal is finished and the first trip over it will be made December 1.

ANOTHER competitor has arisen to fight for Europe's grain trade or rather part of it. Mexico is reported to have exported the first cargo of corn to Europe recently.

A. POLIAKOFF of Moscow, Russia, is now in this country as the special delegate of the Russian Minister of Finance, to study the construction and use of grain elevators.

SEND us news of your district of interest to the grain trade. If you buy or build an elevator, sell or burn out, improve or remodel or take a partner for life or business, let us know it.

It may be surprising to many of our readers, but we are told on pretty good authority that a larger percentage of the transactions on the Berlin bourse are purely speculative, than on the Chicago Board of Trade.

THE Webster Manufacturing Company of this city carried off medals at the Columbian Exposition on their Lewis Gas Engine, belt conveyors, system of rope drives, and the Coker-Metcalf Power Grain Shovels.

DO YOU know how much wheat will be exported in the form of grain during January? If so, fill out the guessing ticket published in this number. The subscriber who first comes nearest to guessing the correct amount gets \$50.

SEVERAL times during the past year we have had inquiries for Fisher's Grain Tables, a book that has met with a large sale in the past. We have recently secured a few shelf-worn copies which we will mail to any address for 20 cents, which is only half price.

THE new crop of winter wheat has been planted and the crop liars are already soaking their imaginations in vinegar, and their consciences in vitriol. They will kill the crop frequently during the winter, but the farmers will harvest it next fall just as usual.

A VALUABLE reference book for grain merchants and millers has recently been issued by Geo. J. S. Broomhall, editor of the *Corn Trade News*. It is entitled "Annual Review of the World's Wheat Trade," and contains a record of the world's wheat crops, prices, imports and exports, stocks, population, and a review of the trade of each country. It is the most comprehensive and reliable work of the kind that has been published.

IT cannot be denied that there is more than one way of getting a good price for wheat. This fall many farmers have packed their wheat in pig skins and sold it as pork. Few have figured out the gain, so are in the dark as to the results of the transaction. A Michigan farmer who took the trouble to weigh his hogs and grain before putting the one in the other and taking them to market, found that the wheat netted him \$1.10 per bushel. The stock dealer who

bought that grain probably longed for an elevator, not to store the grain, but to elevate his profits.

READERS will notice in this issue the advertisement of the Warren Eye Protector, which is designed for those who work in warehouses, mills, or in irritating dust. It is made by the Nours Verrons Company, Boston, Mass., and is sent by mail on receipt of 50 cents.

THE Philadelphia & Reading and the Panhandle have both refused to take shipments of hay from Western roads. In other words they have refused to do the carrying business which they were incorporated to do. If this matter was shown up in the courts the roads would be called to time quickly.

LAST August a farmer at Casselton, N. D., agreed to buy 15,000 bushels of No. 1 hard wheat of another farmer, at 70 cents a bushel, within 80 days. On the eightieth day No. 1 hard closed at 59½ cents at Minneapolis, so that the optimistic farmer was out something over \$1,500 on his speculative deal.

WHAT has become of the "strong" company that was organized last year to erect grain transfer elevators at Kansas City and other railway terminals and junctions? The shippers are still sorely in need of these grain saving and weight rectifying houses, and would be delighted to learn of the completion of a few well arranged transfer houses at the prominent terminals.

OF the 40 different kinds of weevil and other pests found in the grain exhibits at the World's Fair, 18 are believed to be new to this country, and four of these 18 to be very dangerous, providing they become disseminated and acclimated. To prevent such an occurrence all the infested exhibits were ordered destroyed. It is possible that some of the pests have found a lodgment here, but there is no occasion for borrowing trouble until they make their appearance.

THE falling off in wheat receipts in the Northwest did not set in as early as had been anticipated. Even now it is doubtful what the effect would be of a rise in price of a few cents. Grain has a way of pouring out of "bare cribs and granaries" when the price rises. Pillsbury said in the first week of the present month that the farmers had marketed two-thirds of the crop. He also states that stocks in country elevators and farmers' hands are only half what they were a year ago.

THE North Dakota Railroad Commissioners have succeeded in inducing several Minneapolis and Duluth grain commission firms to deposit \$10,000 bonds with them as a guarantee that they will pay to farmers the proceeds of all grain consigned to them. It would become the farmers of that state in making shipments hereafter to send a bond with every bill of lading to which a draft is attached, to secure the receiver against loss by mixture of dirt, sticks and old iron which get into the grain by mistake sometimes.

SOMETHING like consternation was created on the Chicago Board of Trade by the announcement that the splendid building would soon be an irreparable and dangerous ruin unless prompt measures be taken to underpile the building and sink the foundations to bedrock. Gen. Sooy-Smith has been investigating the building for a long time and has discovered that it is settling irregularly and at the rate of one-sixteenth of an inch per month. It has already sunk eight inches. The irregularity of the settling is what has caused alarm. There is no immediate dan-

ger, but Gen. Sooy-Smith recommends immediate action which will render the building safe for all time to come. The estimated cost of sinking the foundations through the clay substrata is \$150,000. The trouble with the Board of Trade building is the same as with the Federal building in this city; only Uncle Sam's property is in a hopeless state of dilapidation.

THE farmers of the Palouse Valley, Washington, do not admire dealers who buy grain at a mortgage sale and have issued threats of dire vengeance upon the head of any person that bids on crops that are being sold at mortgage foreclosure. This may keep some of the grain dealers from bidding, but it will also keep capitalists from lending money, and the rate of interest will advance accordingly.

A RECENT visit to the tracks of one road entering Chicago from the west proved conclusively that all the careless grain shippers have not retired from the business. A shipper who starts an old car that is heavily loaded or a car that is not properly cooped must expect to suffer loss by leakage in transit. When cars offered to shippers are so old and weak that they bulge when heavily loaded with grain shippers should accept them only under protest and sue carrier for loss if shortage occurs.

JUST before the expiration of the time for paying taxes without penalty in Indiana the farmers marketed considerable grain, depressed local markets and accepted most any price offered. One buyer informs us that his house was nearly full and he was not anxious to buy, but the farmer insisted on having an offer and he accepted the first one made, although it was 10 cents below what the buyer had been paying a few days before. A tax penalty is more influential than a hold-your-wheat circular.

THE American Warehousemen's Association held its annual meeting at Louisville, Ky., recently, and discussed a number of subjects of commercial interest. The association aims to facilitate and expedite the business of securing the adoption of uniform practices and to make warehouse receipts acceptable security to all lenders. The honest practice of the past few years and the earnest efforts of warehousemen to protect the interests of holders of storage certificates has accomplished much in this line.

A GRAIN is grown in the Himalayan Mountain country that should be investigated by our general government, or by some of the interested state governments. It is called *Kournee*, and the fact that it grows at such altitudes is what lends special interest to it. It looks something like wheat, but has very much larger ears. The grains are quite small, of a brown color and quite like wheat. It is not impossible that it is wheat modified by culture and circumstances. It yields very largely and would be suitable for our mountain and extreme northern territory, and for British America. The plant from which the Indian tea, now so popular, was grown, was found growing wild in the same Himalayan district.

WE learn from the daily press that the Minnesota Grain Growers' Association, at a meeting lately held at Crookston, "passed a resolution vehemently condemning the action of Boards of Trade in fluctuating wheat values and of millers all over the country in keeping down the price of grain and at the same time maintaining high prices on flour." This sort of talk sounds like old times when the Hatch bill was on the carpet, and the lurid orators of the alliance convinced their auditors that Boards of Trade put prices up and down at pleasure and always to the disadvantage of other people. After last summer's experience, with everything dead in

the grain pit and millers buying from hand to mouth, we thought we should hear no more for some time about the evil influence on the price of a commodity that buying it and selling it, has, but it seems the campaign has commenced early.

RECENTLY a new commission firm appeared on the Montreal market, and by sending out thousands of circulars, in which it offered to handle grain and produce at a lower commission than the rate ruling in that market, many dealers were induced to make consignments to it. After enjoying a rushing business for about a month the manager disappeared, and the consignors appeared in quest of the returns for their produce. As a result the shippers are out about \$10,000, and they now spend their leisure time cursing the day they heeded the circular of an unknown firm. It is the firms that advertise and keep their business constantly before prospective patrons and thereby secure a reputation for honorable dealing that merit the business of country shippers.

The Western Union Telegraph Company, like all public carriers, always attempts to escape liability for losses occasioned by the errors of its servants. A case has recently come to light in Michigan, and the trial court has decided against the telegraph company. Forest Bros. of Lansing quoted hay to an upper peninsula firm at \$16.50. In transmitting the message the carrier changed the price to \$16.15 and the recipient ordered 25 carloads. The hay was shipped and the seller sued the telegraph company for the difference. The jury rendered a verdict for the plaintiff and the telegraph company has appealed the case to the Supreme Court in hope of securing a compromise with the plaintiff before the hearing. Public carriers do not like to have the court records weighed down with decisions against their unlawful practices, so after worrying prosecutors with delays and appeals compromise by paying nearly the full amount claimed and thereby prevent a decision being rendered against their practice. In this case the defendant was clearly to blame for the loss and should be required to make it good to the plaintiff.

DOTS AND DASHES.

The guessing ticket will be found in another page of this issue.

There are no restrictions as to the number of guesses to which each subscriber is entitled. Send in as many guesses as you have tickets.

With a great many people experience is like the rear lights on a ship. It only serves to light up the path that has been gone over. The cause of a failure or lack of complete success in business is oftentimes caused, as well by honest efforts wrongly directed and illy applied, as by incompetency. A trade paper is a guide which if read and studied will prove the one thing needful. Do not allow your lights to remain in the rear where they will do no good. Swing them around in front. If you are in the grain business subscribe to the AMERICAN ELEVATOR AND GRAIN TRADE and keep posted.

The receipts of wheat at Baltimore, Md., from January 1 to October 31 were 13,156,528 bushels, against 15,690,038 bushels for the same period of 1892. The receipts of corn during the same period were 8,259,788 bushels, against 19,185,565 bushels in 1892. The receipts of flour during the same period were 3,026,159 barrels, against 2,984,068 barrels in 1892. The exports of wheat from January 1 to October 31 were 12,294,710 bushels, against 14,134,304 bushels for the corresponding period of the year preceding. The exports of corn were 6,637,179 bushels, compared with 17,726,818 bushels for the year preceding. The exports of flour were 2,861,888 barrels, compared with 3,112,829 barrels for the year preceding.

RICE IMPORTS AND EXPORTS.

Rice aggregating 380,000 pounds, valued at \$13,100, was imported free under reciprocity treaty with the Hawaiian Islands, during the month of September, compared with 986,900 pounds, valued at \$43,106, imported during September, 1892; and during the nine months ending with September, 3,334,800 pounds, valued at \$120,732, were imported, against 7,016,400 pounds, valued at \$313,418, imported during the corresponding months of 1892.

Of rice imported free of duty we re-exported 2,190 pounds, valued at \$89, during September, against 52,500 pounds, valued at \$1,405, re-exported in September, 1892; and during the nine months ending with September, 8,706 pounds, valued at \$348, were re-exported, compared with 54,189 pounds, valued at \$1,517, re-exported during the corresponding months of 1892.

Dutiable rice aggregating 1,814,241 pounds, valued at \$30,680, was imported during September, against 5,947,958 pounds, valued at \$95,829, in September preceding; and during the nine months ending with September, 47,481,781 pounds, valued at \$786,678, were imported, against 68,747,378 pounds, valued at \$1,326,207, imported during the corresponding months of the year preceding.

Rice flour, rice meal and broken rice amounting to 4,090,658 pounds, valued at \$63,518, was imported during September, against 4,855,910 pounds, valued at \$89,997, imported in September preceding; and during the nine months ending with September rice flour, rice meal and broken rice amounting to 47,444,769 pounds, valued at \$787,265, was imported, against 47,643,227 pounds, valued at \$890,727, imported during the corresponding months of the year preceding.

Of dutiable rice we re-exported 1,081,133 pounds, valued at \$19,389, during September, against 741,145 pounds, valued at \$15,254, re-exported in September, 1892; and during the nine months ending with September we re-exported 8,759,312 pounds, valued at \$162,741, compared with 7,838,562 pounds, valued at \$161,805, during the corresponding months of 1892.

There was no rice flour, rice meal or broken rice re-exported in September, against 81,230 pounds, valued at \$1,700, during September, 1892; and during the nine months ending with September there was none re-exported, compared with 81,230 pounds, valued at \$1,700, re-exported during the nine months ending with September, 1892.

BILL OF LADING RATES NOT RELIABLE.

One of the practices imposed upon railways by the operation of the act to regulate commerce is the correction of charges to correspond with the legally published tariff rate; and very naturally, where a bill of lading has been issued in which the originally used figures appear, objection is made by shippers who do not understand why a bill of lading rate cannot be protected. Before the enactment of the law the bill of lading was commonly a contract between the parties and enforceable in court, but since the act became operative the insertion of a rate in the bill of lading is of no force. If in conformity with the legally published tariff rate it is valid but altogether unnecessary. If at variance with the legal rate it is invalid and therefore superfluous.

The fact that the rate is inserted by the agent of the railway, and the further fact that in consequence of his statement contracts have been entered into, possess no force for the reason that the law provides a means whereby a shipper can ascertain the rate on his own behalf. No doubt the railways and the shippers occasionally wish the law was of a more judicious character in some particulars, but unfortunately for them it aims at, although it does not always effect, substantial equity.—*Railway Review*.

That \$50 ornamenting the upper left hand corner of our prize guessing contest ticket looks awful big. And it will look just a trifle bigger to the one who holds it in his fingers after the contest is over. Fill out the ticket and send it in with your subscription. You may get it.

Trade Notes.

O dear to my heart are the scenes of my childhood,
When fond recollections presents them to view,
The orchard, the meadow, the deep tangled wildwood
And every loved spot which my infancy knew.
And perhaps that's the reason my business is ailing;
Indeed I have fears of its early demise.
I cling to the past—yes, that is my failin'
For I am known as the merchant who don't advertise.
An old poky merchant, an iron-bound merchant,
A moss-covered merchant who don't advertise.

When you advertise your main object should be to associate your name with your goods; next to make a distinct statement.

When you seek a medium for advertising remember that the character of the journal often colors the value of the advertiser.

The Robert Aitchison Company, manufacturers of preformed metal, report trade as picking up and good prospects for rapid increase of business.

When an eye first sees your advertisement it may appeal to the eye only; it is only in repeated efforts that advertising reaches the object—the customer.

J. A. Campbell & Son of Lincoln, Neb., write us in regard to their trade that they have had their share of elevator building this season and prospects are good.

The Sykes Steel Roofing Company of Chicago, Ill., and Niles, O., has been awarded "Medal" and "Diploma" at the World's Columbian Exposition on their Sykes Patent Standing Seam Steel roofing.

The Bonanza Manufacturing Company of Brodhead, Wis., has been incorporated with a capital stock of \$2,000 to manufacture grain cleaners. The incorporators are B. E. Lawton, C. O. Lawton, O. J. Barr and others.

"If 'to do' were as easy as to know 'what to do', churches had been temples and poor men's cottages, rich men's palaces." It is exactly so with our wishes in regard to our guessing contest. If our wishes could be realized every subscriber and every one who becomes such would receive our \$50 prize. But by the law of limitation as it can fall to but one we will at least show our good will by wishing it may be you. You have also a part to play, however, that our wish may come true. Become a subscriber by sending \$1 and your guess to the AMERICAN ELEVATOR AND GRAIN TRADE, 184 Dearborn street, Chicago, Ill.

Bags and bagging valued at \$77,933 were imported during September, against an amount valued at \$135,623 imported during September, 1892; and during the nine months ending with September bags and bagging valued at \$898,068 were imported, compared with an amount valued at \$1,308,425 imported during the corresponding months of 1892. Burlaps valued at \$322,005 were imported during September, against an amount valued at \$174,898 in September preceding; and during the nine months ending with September burlaps valued at \$4,628,617 were imported, compared with an amount valued at \$4,866,765 imported during the corresponding months of the year preceding. Of imported bags and bagging we re-exported an amount valued at \$1,727 in September, against exports valued at \$3,294 in 1892; and during the nine months ending with September bags and bagging valued at \$30,245 were re-exported, compared with exports valued at \$27,060 during the corresponding months in 1892. Burlaps valued at \$28 were re-exported in September, against none re-exported in September, 1892; and during the nine months ending with September burlaps valued at \$2,051 were re-exported, compared with an amount valued at \$1,049 re-exported during the corresponding months of 1892.

Our guessing contest is in full swing. A great many are coming into line, but as long as you are among the minority of non-subscribers we are not satisfied. We want your subscription. And we want you in turn to derive the benefit which will come by reading every month all the latest news and most important subjects which come up daily in reference to your business. And lastly we want you to receive the \$50. See guessing contest ticket in this issue.

ELEVATOR AND GRAIN NEWS

A new grain elevator is talked of, for La Hogue, Ill.

R. J. Andrews has erected a grain warehouse at Randall, Minn.

A rice mill will be established at Dayton, Tex., by Capt. J. W. Davis.

The Grand Republic Elevator at Superior, Wis., is now receiving wheat.

A trustee has been appointed for Griggs Bros., a grain firm of St. Paul, Minn.

The elevator at Nowata, Ind. Ter., has lately adopted the Dickey Overblast.

The Northern Pacific elevator at Colton, Wash., has been leased by Barnett & Kyle.

Eichelberger Bros., dealers in grain and coal at Boise City, Idaho, have sold out.

Hopkins & Buch, grain dealers at Crete and Kramer, Neb., have dissolved partnership.

The Farmers' Elevator Company at St. Louis, Mo., have increased their capital to \$300,000.

The new elevator at Vernon Center, Minn., is already doing a large business in grain.

Aug. Wolf & Co. are building a 30,000-bushel elevator for H. W. Baker at Berryville, Pa.

A. G. Scott & Son, dealers in grain at Holdridge, Loomis, and Axtell, Neb., have sold out.

A new feed store has been established at Huntington, Ind., by the firm of Roash & Little.

George Rice of Winnipeg, Mann., has entered into the grain crushing and grinding business.

Webb & Dresser, dealers in grain and hay at Briggton, Me., have dissolved partnership.

Chas. J. Gunderson & Co., a grain commission firm at Chicago, Ill., have dissolved partnership.

The elevator at Assumption, Ill., has adopted the Dickey Manufacturing Company's Flax Mill.

P. Fewster & Co., dealers in feeds and seeds at Vancouver, B. C., have dissolved partnership.

R. C. Strother has bought the Seneca Cottonseed Oil Mill at Seneca, S. C., at auction for \$10,425.

The Dickey Warehouse Mill has gone into the elevators at Broken Bow, Neb., and Bethany, Minn.

N. Staples & Sons at Absaraka, N. D., have adopted the Dickey Manufacturing Company's Overblast.

Denison, Jackson & Co., Hartford, Wis., have put in a Dickey Manufacturing Company's Flax Mill.

Audley & Jones, Hartland, Wis., have adopted the A. P. Dickey Manufacturing Company's Overblast.

The wholesale grain and feed store of J. A. Boardman & Co. at Lewiston, Me., is doing a large business.

Lake Charles, Tex., has a large rice mill, thoroughly equipped with capital to buy and machinery to polish.

One of the A. P. Dickey Manufacturing Company's Warehouse Mills has gone in the elevator at Conway, Mo.

Karl Ehrlich has recently made improvements and increased the capacity of his elevator at Lehigh, Kan.

The Coatsworth estate is figuring on plans for rebuilding their elevator burned August 15 at Buffalo, N. Y.

Marselus Bros., Sandwich, Ill., have lately put in one of the A. P. Dickey Manufacturing Company's Flax Mills.

The Dickey Warehouse and Elevator Grain Cleaners have lately been added to elevators in New York and Milwaukee.

The Irvin City Brewing Company at Grand Rapids, Wis., has filed articles of incorporation with a capital stock of \$20,000.

A large increase over the grain receipts of last year has been experienced by the owners of the elevator at Ann Arbor, Mich.

A complete 10,000-bushel grain elevator is being built by Aug. Wolf & Co. for W. N. Lemen at Shepherdstown, W. Va.

E. A. Duncan has leased the farmers' elevator at Rapid City, Man., and has started out in the grain and elevator business.

J. A. Campbell & Son of Lincoln, Neb., have recently finished elevators at Rising Sun, Neb., and Oskaloosa, Ia. Both houses use gasoline engines to

furnish the power. They also expect to have completed soon a steam power plant at Prague, Neb.

The Orondo Shipping Company has erected a warehouse at Chelan Falls, Wash., for shipping wheat during the present season.

About 5,000 tons of damaged wheat, some of it being worthless, was stored at Tacoma, Wash., during the last of October.

Wheat receipts have been light this fall at the grain warehouse at Swanville, Minn., owned by the Monarch Elevator Company.

Smith & Wood, hay shippers at Marquette, Man., have dissolved partnership. The business will be continued by Mr. Wood.

The Brandon Farmers' Elevator, Milling and Trading Company, Limited, at Brandon, Man., has recently been incorporated.

The O'Neill elevator at Rolling Stone, Minn., operated by Jacob Valentine, received over 6,000 bushels of grain one day recently.

Chicago capitalists are reported to have offered a rental of \$115,000 per year for five years for the Eastern Elevator at Buffalo, N. Y.

Wilson & Co., Rushville, Ill., have lately added one of the A. P. Dickey Manufacturing Company's Grain Cleaners to their elevator outfit.

Furry's grain warehouse at Welland, Ont., is being completed as rapidly as possible. It was expected to be finished by the first of November.

U. M. Holmes & Co., Cookville, Ill., have put in the largest size Overblast made by the A. P. Dickey Manufacturing Company at Racine, Wis.

J. L. C. Guest, a grain merchant doing business under the firm name of Guest Bros. at Duncan, I. T., was closed by attachment October 11.

A permit was issued October 31 for a \$50,800 farmers' elevator to be built at St. Louis, Mo. The building will be 88x60 feet and five stories high.

Four wheat bins in the elevator of E. J. Edmunds & Co. at Bruce, Minn., fell out recently, allowing about 7,000 bushels to fall upon the ground.

A new firm of grain brokers has been established at Winnipeg, Man., composed of John Wilson and S. B. Flower. The style of the firm is Wilson & Co.

The grain firm which has been operating the grain warehouses at Beaver Creek, Minn., has rented them to the Peavey Company of Minneapolis, Minn.

The Ottawa Brewing & Malting Company has been incorporated at Montreal, Que., with a capital stock of \$15,000, to do a brewing and malting business.

The Eastern Elevator recently completed at Buffalo, N. Y., took in the first grain on November 8. James Stewart & Co., of St. Louis, Mo., are the builders.

It was resolved at a meeting held recently to build a farmers' elevator at Minneota, Minn. A committee of six was appointed to solicit subscriptions to shares.

The new elevator which is being built for the Mulford Elevator Company at Minneapolis, Minn., is now going up rapidly with 200 men engaged on the work.

The Zenith Elevator Company of Duluth, Minn., on November 6 filed articles of incorporation and a certificate of incorporation with the secretary of state.

A large amount of grain is coming to Lennox, S. D. They have two flat houses and two elevators buying wheat, besides several independent buyers on the street.

William Green, a prominent grain dealer of Carlisle, O., has made an assignment. The liabilities are estimated at \$10,000, with assets at about the same figure.

The St. Louis Hay Exchange, the Victoria Milling Co., and the Illinois Central Railroad Company are recent purchasers of scales with the Demuth Check Beams.

David Bowden, grain buyer at Quanah, Tex., for Wm. Cameron & Co. at Ft. Worth, Tex., during the middle of October had his elevator filled to its utmost capacity.

I. H. Burt, who has been purchasing grain for another firm at Beaver Creek, Minn., has rented the old Henry Bertuleit warehouse and is buying grain for himself.

Chas. Braithwaite has taken offices in the Grain Exchange building at Winnipeg, Man., and will handle grain for the Patrons of Industry, of which he is president.

Honstain Brothers of Minneapolis, Minn., have been awarded the contract for the erection of the 10,000 bushel elevator at Minneota, Minn., for the Farmers' Association.

John Maddock, who was arrested recently for stealing wheat by sweeping the grain from the empty cars on the Eastern Minnesota Railroad, pleaded guilty and was sentenced to 10 days in jail. His partner in

crime, John Jackson, also pleaded guilty, and was sent up for 60 days. The punishment like the crime will probably be "against the grain."

Extensive repairs have been made to the large grain elevator of the Hudnut Company at Green Valley, Ill. They are getting ready for receiving the corn crop in that vicinity.

For the four weeks ending October 28 the number of cars of grain inspected at Winnipeg, Man., were 988, against 1,609 for the corresponding period of the year preceding.

Work has commenced on Faragher & Ulveling's grain elevator at Adrian, Minn., which was burned October 10. It was expected to be completed by the 5th of November.

C. S. Hunsicker, merchant and grain dealer of Woodlyn, O., has sold his general store to James Anderson, and will devote his entire time to the grain and coal business.

Work on the annex to elevator "C" at Minneapolis is being pushed as rapidly as possible. It will have a capacity of 500,000 bushels, and is expected to be completed by November 15.

Alonzo Barton, recently doing business at the elevator at Wilton, Ia., has moved to Sweetland Center, Ia., where, in connection with George Kelly, he has put in a steam feed mill.

John Purvis, a grain commission man at Chicago, Ill., on October 19 made an assignment to the Chicago Title & Trust Company. The assets and liabilities are both given at \$40,000.

The new elevator of Foragher & Ulveling at Adrian, Minn., will have a capacity of 20,000 bushels. Honstein Brothers, of Minneapolis, Minn., are the contractors and builders.

Fred McMullen, the junior member of the grain firm of Simons & Co. at Buffalo, N. Y., will continue the business under his own name. N. C. Simons, the senior partner, has retired.

The farmers of the state of Washington have organized a company with a capital stock of \$150,000 for the purpose of building a grain warehouse and elevator at Tacoma, on the coast.

Wheat is handled in a very satisfactory manner in the West Seattle elevator at Seattle, Wash. On October 23 over 800 tons or 13,000 sacks were loaded into the ship Oweenee by 12 men.

The grain business and general store of Florian Groshour at Ijamsville, Ind., has been closed under a chattel mortgage. Liabilities \$25,000, with assets estimated at considerably less.

The Wisconsin Grain and Malt Company's plant at Appleton, Wis., is just half the size of the Pabst malting house at Milwaukee, Wis., which has an annual capacity of 800,000 bushels.

The towmill at Windom, Minn., has fallen into the hands of Mr. Gibson. The present capacity will be doubled, the building enlarged, and the plant placed otherwise in a much better condition.

Grain is coming in in large quantities at Fulda, Minn. They are compelled to load cars at the warehouses at night in order to make room for the large amount of grain received during the day.

The Stewartville Co-operative Shipping Company at Stewartville, Minn., has been organized to ship grain, seeds, live stock and other farm products. Capital stock \$5,000; limit of liabilities \$3,000.

J. S. Smith & Co. of Lincoln, Neb., grain buyers and shippers, have opened a branch establishment at Sioux Falls, S. D. They cover all the tributary country, dealing only with country grain buyers.

The Hutchinson Feed and Grain Company was incorporated at Hutchinson, Kan., on October 17, with a capital stock of \$5,000. The directors are George A. Woodard, Mary E. Woodard and Walter Kiles.

Suit has been brought by the Kirkbride-Palmer Company against E. Schrandenbach of Frederick, S. D., to recover \$6,000 which was claimed to be due for wheat furnished the Frederick Roller Mill Company.

The elevator at Lakefield, Minn., on October 30 took in 1,700 bushels of grain. The next day 1,500 bushels were received, and the day following that 1,400 bushels, or an average of 1,500 bushels per day.

Messenger Bros., grain buyers at Albert Lea, Glenville and Armstrong, Minn., have sold out. M. P. Messenger has gone to Waterloo, Ia., and S. Messenger has become one of the managers of the Glenville flour mill.

Suit has been brought against the Lone Star Elevator Company of Dallas, Tex., by Arbuckle Brothers of New York, N. Y., on \$100,000 of bonds which the plaintiff alleges were put up to secure a note for \$65,000.

Martin & Co., brokers in grain, stocks and provisions at Chicago, Ill., have gone out of business. The firm was only about three months old, and almost all the business done was with women of Chicago who were of a speculative turn of mind. Mr. Martin left on a

rising market with about \$2,000, it is alleged, which came into his hands in amounts of from \$10 to \$20 as bets by his woman customers. With his disappearance his lady customers mourn the loss of their money.

The stockholders of the Davenport Malt & Grain Company, at Davenport, Ia., at their annual meeting held recently, re-elected their former board of directors. A dividend of 7 per cent. was declared, payable January 2.

The Farmers' Co-operative Company at Stewartville, Minn., will ship the grain of its members. The company is composed of farmers in the vicinity of Stewartville and now have their new elevators ready for business.

There were 302 carloads, or 241,000 bushels of barley received at Milwaukee during the two days, October 22 and 23. The receipts of barley during the current year are expected to be much larger than they were in 1892.

Burglars picked the lock in the office door of the Winona and Dakota Grain Company's elevator at Sanborn, Minn., recently. A note for \$125, a revolver and a razor were secured. It is thought the robbery was done by tramps.

The Hanson Gregg Grain Company, with a capital stock of \$10,000, fully paid in, filed articles of incorporation October 17. The company will deal in grain and grain elevators and milling machinery, with its offices at Kansas City, Mo.

The Red Bud Elevator and Warehouse Company has been incorporated at Red Bud, Ill., with a capital stock of \$5,000. The incorporators are William A. Dinan, Joseph Roscow, Meadrt Heck, Creastof Godelman and John T. McCaffrey.

B. F. Simmons made an attachment on the stock of grain of A. J. Lane at Weatherford, Tex., on October 10. The amount of the attachment was for \$275. The claim forced Mr. Lane into failure. Amount of liabilities and assets about \$2,000.

S. W. Cissna & Co. have bought the Fayette Grain Elevator at Washington, D. C., and have put it in good repair. New boilers and engine have been put in and, with the Draper warehouse and elevator, Cissna & Co. are prepared to do a big business.

The Bromwell Grain and Feed Company has filed articles of incorporation at Baltimore, Md., with a capital stock of \$25,000. The incorporators are William T. Bromwell, John M. C. Linke, George B. Chapman, John T. Bromwell and Ellwood J. Wilson.

The copartnership which has existed between William Hopps and R. D. Sinton, trading as Hoppes, Sinton & Co. at Baltimore, Md., has been dissolved by mutual consent. The firm did a large business in grain and hay commission, which will be continued by William Hopps & Co.

Stewart's round elevator at Morris, Minn., has been moved from the Great Northern to the Northern Pacific tracks. The removal was a large undertaking, and was accomplished without any accidents. A power house and office are being built. A gasoline engine will furnish the power.

The receipts of grain over the Chicago, Milwaukee & St. Paul Railroad at Milwaukee, Wis., from the 1st to the 26th of October have exceeded by 30 per cent. the receipts of grain for the same portion of any one month in many years. The daily receipts during the month averaged nearly 400 cars.

The Seckner Contracting Company at Chicago, Ill., in addition to their elevator work have a water works and electric light plant in process of construction at Marengo, Ill., and Harlan, Ill., and are also building an extension to the plant of the Grant Locomotive Works, which they built last spring.

C. R. Clark & Co., a receiving firm on the Board of Trade at Chicago, Ill., doing business mostly with country shippers, suspended November 6. The firm's indebtedness is chiefly covered by money due from the country which has been slow in coming in. No figures are given as to assets or liabilities.

Wheat is coming in very slowly at Jamestown, N. D. Farmers have hauled in enough to pay their threshing bills and other pressing obligations, and now the low price is having a bad effect on receipts. The firm of Klaus & Lenz, however, expect to do a large business in grain before the season is over.

General transfer, sorting and inspecting railway yards will be established at South Superior, Wis. The Belt Line Elevator Company has agreed to expend \$4,000 on the grading, and the Great Northern Railway will do the rest. When the new yards are completed wheat will be delivered at South Superior and there sorted and switched to the West End, East End or Duluth mills or elevators without further handling.

A receiver was appointed on October 27 for the Lone Star Elevator Company, capitalized at \$200,000, at Dallas, Tex., and owning elevators at Dallas, Iowa Park, Quanah, Harrold and Vernon. This action was held on application made by Cockrell Bros., who own 1,763 shares of the stock of a par value of \$100 each. The Cockrell Bros. allege that the company

owes \$100,000 in bonds and other debts to the amount of many thousand dollars, and that the net profits of the company are insufficient to pay taxes and interest on its indebtedness.

An independent wheat company has been started at Pukwana, S. D., which has made quite a boom in the Pukwana market. From 2 to 5 cents more is paid for wheat there than at any other point at a considerable distance. The three buyers are taxed to their utmost to take care of the wheat which comes in daily.

Friday, October 27, was appointed by Director General Davis as the day at the World's Fair for the recognition of the grain, coal and lumber dealers. Special arrangements were made and the great body of grain, coal and lumber men coming together from all over the country made the day a grand success.

Houstain Bros. of Minneapolis, Minn., have been awarded the contract for building a 200,000-bushel elevator in Minneapolis for the Security Grain Company. The elevator will be completed by the middle of November. This elevator, in addition to the one now there, will give the Security Grain Company a capacity of 425,000 bushels.

The towmill at Clara City, Minn., is now in operation. The mill was moved there by Fred Slob from Orange City, Ia. A bonus of \$600 had been raised by the village, together with seven acres of ground, to assist in establishing the mill. Quite a large amount has been paid out during the fall to farmers of the vicinity for their flax straw.

The citizens of Pontiac, Mich., held a meeting November 4 at which they decided to raise the amount of money necessary to secure for Pontiac a good grain market. A. M. Varney and Charles Freeman, both experienced buyers, have offered to open an elevator if the citizens would pay them a bonus of \$2,000 per year. A committee was appointed to raise the required funds.

P. Murray Brooks, hay and feed dealer, was recently indefinitely suspended from membership and all privileges pertaining thereto, in the Baltimore Corn and Flour Exchange at Baltimore, Md., for conduct unbecoming a member. On his failure, which occurred recently, it seems Mr. Brooks refused to allow either his creditors or a committee from the exchange to examine his books.

E. D. Rider and Frank Wolf were caught on the night of October 20 while breaking into a car of wheat at Minneapolis, Minn., and were arraigned in the police court the next morning on the charge of burglary in the third degree. The case was continued, the men being held in \$30 bond for their appearance. Minneapolis is earnestly striving to stop the pilfering of grain from cars in that city.

Guesses are coming in rapidly. If you have never been lucky before it is no reason why you may not be this time. We want you to win the prize, and we want you to take the AMERICAN ELEVATOR AND GRAIN TRADE and keep posted on matters of vital importance to your business. You cannot afford to be without it. Do not put this matter off another month, but send us at once your subscription and guess.

The new Lakeside distillery at Carrollville, Wis., started up October 25, with a capacity of 4,000 bushels of grain. The grain elevator connected with distillery has a capacity of 75,000 bushels. The ground dimensions of the distillery proper are 190x195 feet, and the highest part contains six stories. In this building are the boiler room, the stills, the cooling room and the feed elevator. The E. P. Allis Company furnished the boilers, coopers, elevator machinery, shaftings and mill work.

The Anchor Line, Lackawanna Transportation Company, Lehigh Valley Company, Ogdensburg Transit Company, and Union Steamboat Company have issued a joint tariff by lake and rail making the rate on grain, flour, etc., from St. Paul and Minneapolis to Boston 27 cents, and New York 25 cents. A tariff has been issued in connection with the Big Four and Chesapeake & Ohio Railroads making the rate on grain and flour from St. Paul and Minneapolis to Newport News 27 cents per 100 pounds.

At the last weekly general meeting of the Winnipeg Grain Exchange at Winnipeg, Man., boards of arbitration and appeal were elected as provided for by the by-laws. S. A. McGaw, Jos. Harris, W. A. Black, D. H. McMillan, D. G. McBean, Robert Muir and R. P. Roblin were elected as board of arbitrators. G. R. Crowe, N. Bawlf, S. Spink, S. P. Clark, A. Cavanaugh, S. W. Farrell and J. A. Mitchell were elected board of appeal. W. M. Urquhart was at the same meeting elected a member of the exchange.

The Central Elevator and Warehouse Company has been incorporated at New Orleans, La., with a capital stock of \$100,000. The stock is divided into 1,000 shares of \$100 each, and the company is authorized to commence business when 25 per cent. of the capital stock shall have been paid in cash. The object and purpose of the company is to construct and operate warehouses, elevators, railway tracks, docks and other works for the storage and shipping of grain. The officers are Stuyvesant Fish, president; J. C. Welling, vice-president; J. T. Harahan, second vice-

president; and R. S. Charles, Jr., secretary and treasurer. The board of directors are: Stuyvesant Fish, J. C. Welling, J. T. Harahan, Richard S. Charles, Jr., David B. Morey, H. L. Pickering, O. M. Dunn, C. T. Scaife and M. R. Spillman.

A large amount of wet grain was on the market at Buffalo, N. Y., during the first of November. The heavy storms which swept the lakes during that time were the cause. Some of the wheat was sold directly to feed dealers, while some was dropped a grade or two and the loss collected. Complaints of shortages in cargoes have been numerous.

A trust deed of the property of the Minneapolis Terminal Elevator Company at Minneapolis, Minn., has been executed in favor of the Minneapolis Trust Company. The company, which operates elevators "A1" and "A2," owes \$560,000. The debt was incurred in 1888 by buying 1,000,000 bushels of wheat and holding it over until the next year. The value of the property transferred is \$900,000, and transfer was made in order to give the creditors proper protection. The company will go on with their business as usual.

A very finely appointed elevator is in process of construction at St. Joseph, Mo. It will have a capacity of 100,000 bushels, and will cost when complete about \$25,000. The elevator will be 121 feet high and will contain only the latest improvements. The first story will be perfectly open, and will contain the cleaning machinery. The second story, 40 feet in height, will be used for storage purposes. One of the new features about the new elevator will be its facilities for a continuous receiving, cleaning, and running out of the grain. This will be an entirely new arrangement in the construction of grain elevators. Adjoining the elevator an engine house will be erected, 24x40 feet. The elevator is being built by W. H. Harroun & Co. of Kansas City, Mo., and is expected to be in running order by the 1st of January.

OBITUARY

James K. Huron, for many years a prominent grain merchant and miller of Cincinnati, O., died suddenly October 9 of peritonitis.

Robert Warren died of paralysis at his home at Groveland Park, Chicago, Ill., on October 20. He had been in the grain business in 1857, and was located in Chicago since 1865. For many years he was the leading exporter of breadstuffs from the West and acquired a fortune of about \$750,000. In 1890 he met with serious reverses, and his first and subsequent attack of paralysis was known to be the result.

Charles M. Taylor, Sr., president of the Philadelphia Grain Elevator Company, died October 18, in the 77th year of his age. His death was caused by pneumonia, the result of a severe cold. Mr. Taylor was born in Trenton, N. J., Oct. 3, 1817. In his early manhood he was engaged as an engineer in supervising the construction of canals in Ohio. He removed to Philadelphia in 1844. He was engaged for many years in the coal trade, and subsequently, with his sons, undertook the construction and operation of the terminal plants of the Philadelphia Grain Elevator Company, which they organized. His skill as an engineer was exceptional, as was shown in the development of original plans by him in the construction of the Port Richmond Elevator. He was a man of active temperament, and his actions were always governed by a desire to do his duty. He leaves a wife and four children.

Charles Schwartz, one of the most prominent men on the Chicago Board of Trade at Chicago, Ill., died at his home in Chicago on October 27. He was born in Albany, N. Y., in 1839, and came to Chicago in early manhood, becoming connected with the grain business. He mastered the grain business in every department, and in 1871, with William H. Murray, his brother-in-law, formed the commission firm of Murray & Schwartz, which continued until 1873. After a short partnership with H. O. Chambers, which was in turn dissolved, Mr. Schwartz did business alone for several years. In 1881 the firm of J. T. Lester & Co. was organized, composed of Mr. Schwartz, the late John T. Lester and Samuel W. Allerton. The firm was the first on the Board of Trade to establish a private wire between Chicago and New York, the rental of which was \$25,000 annually. In 1882 Mr. Schwartz withdrew from the firm and entered into business with John Dupee, Jr., establishing the firm of which he was the head when he died. Mr. Schwartz was spoken of on the Board as an ideal broker in many respects. None of his traders could approach the extraordinary rapidity with which he could buy or sell grain in an excited market. As a guide his opinion on the market was held in great respect. He was tall and spare with a countenance that indicated resolution and strength, and a face, it used to be said, that would attract attention anywhere. Mr. Schwartz was one of Chicago's wealthy men and was twice married. He leaves a wife and two children.

ITEMS FROM ABROAD

Hungary's hay crop is officially estimated at 9,062,000 tons, compared with 9,653,000 in 1892, and 10,638,000 in 1891.

Italy's maize crop is reported as about 74,000,000 bushels, compared with 70,000,000 bushels in 1892, and a like quantity in 1891.

The first sale of new crop No. 2 Calcutta wheat was made in Liverpool recently at 85½ cents for April and May shipment. Last season the first sale was at \$1.00½, and in 1891 at \$1.20.

Italy's yield of rye in 1892 was 515,000 quarters, compared with a yield of 556,000 quarters in 1891, 537,000 quarters in 1890, 465,000 quarters in 1889, and 442,000 quarters in 1888. The total area devoted to the cultivation of rye in 1892 was 353,000 acres.

The official report gives the conditions of the German wheat and rye crop as good. The winter wheat crop is estimated approximately at 15,500,000 quarters, against 14,500,000 quarters in 1892. The barley crop is estimated at 14,700,000 quarters, against 13,800,000 quarters in 1892.

Roumania's yield of wheat for 1893 was 7,300,000 quarters, compared with 7,300,000 quarters in 1892. The yield of rye was 930,000 quarters, against 529,000 quarters in 1892. The yield of barley was 4,300,000 quarters, against 2,524,000 quarters in 1892. The yield of oats was 1,800,000 quarters, against 1,415,000 quarters in 1892.

Arrivals of grain in Holland during the month of September included 428,000 quarters wheat and 116,000 sacks flour, while the exports included 198,000 quarters wheat and 14,000 sacks flour. The net imports of wheat and flour during August and September amounted to 480,000 sacks, compared with 360,000 quarters in the corresponding period of last season.

The exports of Russia from January 1 to September 25 were as follows: Wheat, 6,754,000 quarters, against 9,706,000 quarters in 1891; rye, 1,280,000 quarters, against 4,776,000 quarters in 1891; barley, 5,385,000 quarters, against 3,040,000 quarters in 1891; oats, 2,993,000 quarters, against 4,981,000 quarters in 1891; maize, 743,000 quarters, against 1,527,000 quarters in 1891.

A powerful syndicate is reported to have been organized at Antwerp under the title of the Grain Warehousing Company. The company is said to be chiefly composed of grain factors trading in that port. The first warehouse will be erected immediately. It will be a silo granary with a capacity of 51,000,000 kilos (the kilo is about 2½ pounds). Twenty-three automatic weighing machines will be included in its equipment.

Norway's imports of rye from August, 1892, to July, 1893, were 760,000 quarters, against 550,000 quarters for the same period of the years 1891-92. The imports of barley for the same period of 1892-93 were 575,000 quarters, compared with 336,000 quarters for the corresponding period of 1891-92. The exports of oats were 14,000 quarters from August, 1892, to July, 1893, compared with 6,000 quarters for the corresponding period in 1891-92.

Sweden's imports of wheat during August and September were 124,000 quarters, against 91,000 quarters for same period last season. The imports of rye were 35,000 quarters, against 41,000 quarters last season. The imports of barley were 2,500 quarters, against 17,000 quarters last season. The imports of flour were 44,000 sacks, against 18,000 sacks last season. The imports of rye meal were 21,000 sacks, compared with 15,000 sacks last season.

During the year ending with March, 1893, Victoria, Australia, produced 14,814,645 bushels of wheat, against 13,679,268 bushels grown in 1892, and 11,495,720 bushels in 1890. Oats amounting to 4,574,816 bushels were grown in 1893, compared with 4,455,551 bushels in 1892, and 5,644,867 bushels in 1890. There were 142,623 tons of potatoes raised in 1893, compared with 200,523 tons in 1892. Hay aggregating 740,049 tons was grown in 1893, against 514,406 tons in 1892, and 666,385 tons in 1890.

Italy's imports of wheat during the season 1892-93 aggregated 4,817,000 quarters, compared with 1,918,000 quarters in 1891-92. The imports of maize amounted to 202,000 quarters in 1892-93, compared with 323,000 quarters in 1891-92. There were 119,000 quarters of barley imported in 1892-93, against 68,000 quarters imported in 1891-92. Oats amounting to 32,500 quarters were imported in 1892-93, against 51,000 quarters in 1891-92. Flour aggregating 10,000 sacks was imported during the season 1892-93, against 7,000 sacks in 1891-92. During the season 1892-93 wheat amounting to 2,070 quarters were exported, against 3,800 quarters exported in 1891-92. There were 34,000 quarters of maize exported in 1892-93, compared with 44,000 quarters in 1891-92. There

were 330 quarters of barley exported in 1892-93, compared with 11,000 quarters exported in 1891-92. Oats amounting to 765 quarters were exported in 1892-93, against 900 quarters exported in 1891-92. Flour amounting to 2,050 sacks was exported in 1892-93, compared with 1,500 sacks exported during the season of 1891-92.

The apathy among Indian wheat shippers continues to command attention: three-fifths of the Indian cereal year has elapsed and only 1,860,000 quarters have been put afloat out of one of the supposed largest crops on record. We learn that stocks in Bombay of old wheat are very light. There is a lot of new crop up country, but dealers do not like the idea of taking this out of the pits and sending it to the ports. The demand is very poor, and holders will not sell till prices improve.—*Corn Trade News, October 24.*

That very little English hay is procurable under \$35 per ton, while in several counties \$40 is being realized, is a reason for cattle selling cheaply, which loses much of its importance in days when freights are lower than for thirty years, and when plenty of foreign hay is to be bought at \$25 per ton. The fact remains, of course, that, as compared with some years, hay is dear, even foreign hay, but roots are good, the cheaper foreign feeding stuffs are very cheap, indeed, and potatoes are plentiful in Germany, the country where an enormous crop is produced.—*London Graphic.*

The total imports of hay into the United Kingdom from Jan. 1, 1893, to Sept. 30, 1893, aggregated 155,766 tons, against 36,900 tons for the same period of the year preceding. From the United States during the same period 64,182 tons were imported, compared with 7,440 tons for the corresponding period of the year preceding. From Canada 34,225 tons were imported, against 6,050 tons in the same period of the year preceding. From Argentina 20,411 tons were imported, against 198 tons in the year preceding. From Holland 18,054 tons were imported, against 11,820 tons in the year preceding.

Considerable has been written in regard to English farmers holding back supplies of the 1893 crop, but taking into account the acknowledged deficiency in this year's yield the deliveries are not smaller than could be expected. The total quantity of English wheat supposed to have been delivered since the commencement of the season amounts to 1,253,000 quarters, against 1,512,000 quarters for the same time last season, or equaling for the entire season 5,400,000 quarters, compared with actual deliveries of 6,300,000 quarters in 1892-93, 7,000,000 quarters in 1891-92, and 7,800,000 quarters in 1890-91. The crop of 1892, it is generally estimated, will not afford more than about 5,500,000 quarters for the mill, so that it will be seen that the claim that the farmers are holding back their wheat has no foundation.

The question has naturally been raised by the Russo-German tariff war, How far can Germany dispense with Russian rye? For the past cereal year (1892-3) Germany's rye imports were only returned at 1,676,390 quintals of 290.46 pounds each. These are low figures in comparison with the eleven years between 1880-1 to 1891-2, when the least amount of rye imported in one year (in 1887-8) reached 3,479,000 quintals, which is more than double the figures for the past cereal year. A sufficient explanation of this phenomenon is found in the rich rye harvest of 1892, which gave a surplus exceeding the mean yield of the preceding ten years by some 10,930,000 quintals. The harvest just gathered is estimated to be about 8,380,000 quintals less than its predecessor, which will require heavier imports during the present cereal year. But whatever the deficiency may be it seems apparent that it can be met, at a pinch, from non-Russian sources.

The following are the imports of grain by quarters by the United Kingdom during the cereal year 1892-3 and 1891-2. From North Russia 2,349,200 quarters were imported in 1892-3, against 2,023,500 quarters in 1891-2. From South Russia 122,900 quarters were imported in 1892-3, against 22,500 quarters in 1891-2. From Sweden 1,385,600 quarters were imported in 1892-3, compared with 627,300 quarters in 1891-2. From Canada 515,000 quarters were imported in 1892-3, against 109,600 quarters in 1891-2. From the United States (Atlantic) 352,700 quarters were imported in 1892-3, compared with 1,178,400 quarters imported in 1891-2. There were 150,600 quarters imported from New Zealand in 1892-3, against 292,100 quarters in 1891-2. There were 159,300 quarters imported from Germany in 1892-3, compared with 114,900 quarters imported in 1891-2. From Holland there were 110,400 quarters imported in 1892-93, against 263,700 quarters in 1891-2. From Denmark 74,300 quarters were imported in 1892-3, against 600 quarters in 1891-2. From France 32,300 quarters were imported in 1892-3, against 486,900 quarters in 1891-2. From Roumania 39,600 quarters were imported in 1892-3, against 51,000 quarters in 1891-2. From Turkey in Europe 79,500 quarters were imported in 1892-3, against 85,600 quarters in 1891-2. From Turkey in Asia 56,000 quarters were imported in 1892-3, compared with 87,000 quarters in 1891-2. From Norway 4,300 quarters were imported in 1892-3, against 1,000 quarters imported in 1891-2. The total

imports from all countries aggregated 5,454,000 quarters during the cereal year 1892-3, compared with 5,583,400 quarters in 1891-2.

The imports of barley by the United Kingdom during the crop year 1892-93 aggregating 4,776,500 quarters, against 4,658,000 quarters imported during the crop year 1891-92. From South Russia 2,489,000 quarters were imported in 1892-93, against 1,098,000 quarters in 1891-92. From North Russia 41,800 quarters were imported, against 88,000 quarters imported in 1891-92. From Turkey in Asia 746,000 quarters were imported in 1892-93, against 888,000 quarters in 1891-92. From Turkey in Europe 54,700 quarters were imported in 1892-93, against 178,000 quarters in 1891-92. From Roumania 342,100 quarters were imported in 1892-93, compared with 810,000 quarters in 1891-2. From the United States (Pacific) 211,000 quarters were imported in 1892-93, compared with 103,000 quarters imported in 1891-92. From the United States (Atlantic) 55,100 quarters were imported in 1892-93, compared with 300,000 quarters imported in 1891-92. From Canada 25,000 quarters were imported in 1892-93, against 131,000 quarters in 1891-92. From Chile 68,100 quarters were imported in 1892-93, compared with 67,000 quarters imported in 1891-92. There were 152,500 quarters imported from France in 1892-93, compared with 491,000 quarters in 1891-92. From Denmark 171,300 quarters were imported in 1892-93, and none in 1891-92. From Germany 146,500 quarters were imported in 1892-93, compared with 49,000 imported in 1891-92. From Sweden 29,400 quarters were imported in 1892-93, and none in 1891-92. From Holland 57,800 quarters were imported in 1892-93, against 9,000 quarters imported in 1891-92.



Tickets of membership to the Produce Exchange at New York, N. Y., have been held at \$520.

The members of the Merchants' Exchange at St. Louis, Mo., have decided by a vote of 796 to 24 to close the Fourth street entrance to the exchange building.

The Chicago Board of Trade at Chicago, Ill., held no session November 1, out of respect to the memory of Mayor Carter H. Harrison, who was assassinated October 28.

The annual meeting of the Chamber of Commerce at Minneapolis, Minn., was held October 19. At the meeting the bonded indebtedness of the body was shown to be \$100,000, while to offset this it has collateral assets amounting to \$107,587.

Denison B. Smith, secretary of the Toledo Produce Exchange at Toledo, O., celebrated his 76th anniversary on the 26th day of October. He was born at Stonington, Conn., in 1817, and came to Toledo in 1836. He has seen the city grow from 1,000 to 100,000 inhabitants.

The building occupied by the Merchants' Exchange at St. Louis, Mo., will be greatly improved. At present the building is in the name of the Chamber of Commerce Association, and a nominal indebtedness of \$200,000 stands against it. It is the intention of the exchange to buy it at public sale from the Chamber of Commerce Association, when the latter organization will cease to exist. The work on the intended improvements will be commenced immediately.

At the meeting of the grain, lumber and coal dealers in Music Hall at the World's Fair on October 27, representative speakers from the members of each industry addressed the assembly. George F. Stone, secretary of the Board of Trade, spoke for the grain interests. His remarks were listened to attentively throughout. All the speakers concurred in the idea that the principal World's Fair buildings should be allowed to remain as a memento of the fair and as an ornament to Chicago.

The directors of the Chicago Board of Trade at Chicago, Ill., have ordered an amendment to the rules, which provides for the closing of the board on Saturday at noon during the entire year. Amendments have also been made which do away with the afternoon delivery and make the morning delivery from 8:30 to 9:15 o'clock, the same as on the first of the month. The time for the delivery of cash property also has been changed to 12 o'clock on Saturday instead of 2 o'clock, as on other days.

We intend to give every one a chance and will publish our guessing contest ticket in each number of the *American Miller* and *AMERICAN ELEVATOR AND GRAIN TRADE* up to and including the December numbers. It is not a good plan, however, to wait for the grand rush. While your chances for making a more accurate guess may be better later in the season, yet this is offset by the fact that some other man who has guessed no better than you will carry off the prize from having sent in his guess first. Do not then delay in this matter but send in your guess at once.

CROP : CONDITIONS.

KENTUCKY.—The state commissioners' crop report for November shows that wheat sowing has progressed finely, and crops are in fine condition.

VIRGINIA, HILLSBORO, LOUDOUN Co., October 31.—The wheat crop in our locality is an average yield and fair quality. The corn crop is a failure—in fact, we have no corn. H. J. DORSEY & BOWERS.

WASHINGTON, PULLMAN, WHITMAN Co.—It looks here as if the remaining crops would not be saved. A great amount of wheat has been spoiled that would have been saved if we had had better weather.

MINNESOTA.—Minnesota has the largest corn crop that she has produced in years. Every farmer is building new cribs, and even then finds he has not sufficient room to take care of the extra large crop.

IOWA, DAVENPORT, SCOTT Co.—The barley crop is about half a yield this year, but is of a very fine quality. There is only one place in this country where a better barley is produced than ours, that being a small section in Wisconsin. The crop is coming in rapidly to the elevator men. G.

WINTER WHEAT.—In the states east of the Mississippi and south of the Ohio River is reported in good condition. In Missouri, over most of the state the same is true, with some complaints of drouth in the Southwest. Northern Texas, Eastern Kansas, Oklahoma and Nebraska need rain.—*Toledo Market Report.*

MISSOURI, JEFFERSON CITY, November 10.—The early sowing of winter wheat in this vicinity and other parts of Central Missouri is reported in good condition, well up and doing well. Later planting, probably 20 per cent. of the total, has not made its appearance on account of the drouth which has prevailed here for the last six weeks.

ILLINOIS, SPRINGFIELD, SANGAMON Co.—The corn brought to market here is better in quality and is more evenly matured than that which was received at this time last year. Good dry corn of this year's crop is in demand and is worth 26 to 27 cents. Old yellow corn is worth 30 cents, and old white or mixed corn 29 cents. Not much wheat was taken in the last of October, and the movement of old corn had fallen off considerably. Oats are coming in in moderate quantities. The best wheat commands 50 cents. Soft or damp corn will not be taken at the elevators at any price until cold weather has frozen it.

KANSAS.—The growing wheat crop in Kansas is better now than it was at this time last year, and the farmers are jubilant over the prospects. The rain which fell over the state September 27 filled the earth with moisture, enabling the farmers to sow wheat under the most favorable conditions. The grain sprouted quickly and the stand is good. Prospects are particularly good in the central third of the state, which is the great wheat belt. The farmers sowed their wheat late in September and early in October, taking advantage of the excellent condition of the ground. In the Western third of the state many farmers were unable to get seed until late in October, and were, therefore, delayed in sowing. In Eastern Kansas the wheat, what there is of it, is growing nicely. The acreage of wheat in Kansas this fall will be a great deal less than that of last fall, partly the result of the low price of wheat.

MICHIGAN.—The Michigan monthly crop report for November shows a reduction in the area sown to winter wheat of 23 per cent. for the state. This is attributed to the extreme drouth in seeding time and to the low market price of wheat. The growing plant is small but in fairly good condition and little damage is reported from insects. Its condition, compared with the average years, is 89 per cent. The total number of bushels reported marketed in October was 1,127,516 bushels, and for August, September and October 4,654,000, or 787,117 bushels less than the same period last year. Corn yields 47 bushels of ears per acre in the state, which is three bushels below the average. The acreage of clover seed harvested is about seven-tenths of an average, and the yield 120 bushels per acre. Potatoes yield 57 per cent. of an average crop. There are 141,235 farms in the state, which average 90.02 acres each.

GOVERNMENT CROP REPORT.—The November returns to the Department of Agriculture of the rates of yield per acre make the average for corn 22.6 per bushel, which is the smallest yield reported, excepting those of 1886, 1887 and 1890, for the past ten years. The yields for those years were respectively 22, 20.1 and 20.7 bushels. It is less than the average for the ten years 1870 to 1879 by 4.5 bushels less than the average for the succeeding decade, 1880 to 1889, by 1½ bushels, and less than the average for the three years 1890 to 1892 by a little over 1 bushel. The result is in harmony with the reported indications during the growing season. The July returns of condition were high, being 93.2, from which point there was a rapid decline, ending in the returns of October at 75.1, a fall of a little over 18 points; a result due in the main to the severe, extensive and persistent drouth. The

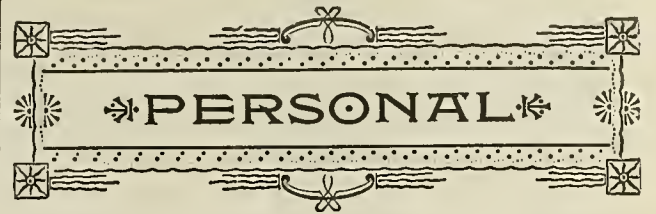
yield of the principal corn states are reported as follows: New York, 29.3; Pennsylvania, 24.9; Ohio, 24.2; Michigan, 33.7; Indiana, 24.3; Illinois, 25.5; Iowa, 35.4; Missouri, 27.5; Kansas, 20.3; Nebraska, 25. The returns relative to potatoes give the estimated average yield per acre for the whole country at 72.2 bushels. The average yield of hay is reported at 3.20 tons per acre, as against 1.17 tons in 1892. The reports as to the yield of buckwheat give a general average of 14.7 bushels per acre, as against 11.1 in 1892 and 15.3 in 1891.

CALIFORNIA.—Based on complete returns for 16 years, the average wheat yield in California each year is 1,074,347 tons. It is thought the crop this year is about an average, or, to be conservative, 1,000,000 tons. On June 1 there were 236,795 tons on hand, since which time 24,405 tons have been received from Oregon and Washington, a total of 261,200 tons. The exports from June 1 to November 1 amount to 298,897 tons, which shows on that date apparently but 37,697 tons of new crop had been exported. Allowing 15,000 tons a month for local consumption, or 75,000 tons for the five months in question, but 112,697 tons new crop have been accounted for, leaving 887,303 tons in sight available. As the invisible supply is always large, and particularly heavy when low prices rule, and as receipts from the North are usually sufficient to supply about one-third of local requirements the year through, the bulk of the stock in sight is available for export.—*Commercial News, San Francisco.*

OHIO.—The report of the Ohio State Board of Agriculture for November is as follows: The following estimates are made after carefully calculating the reports from regular township crop correspondents. For acreage of the crops named, comparison has always been made with returns from township assessors: Wheat.—Acreage sown this fall compared with last year, 94 per cent. Estimated area for the harvest for 1891, 2,516,566 acres. Condition of the plant compared with full average, 95 per cent. Average date of seeding, September 26. Condition of soil at time of seeding, fair and good. Barley.—Acreage sown this fall compared with last year, 96 per cent. Estimated area for the harvest for 1891, 15,189 acres. Condition of plant compared with a full acreage, 96 per cent. Rye.—Acreage sown this fall compared with last fall, 95 per cent. Estimated area for the harvest of 1891, 40,914 acres. Corn.—Acres planted in 1893, 2,707,245 acres. Estimated product compared with an average, 64 per cent. Oats.—Acreage sown in 1893, 889,701 acres. Product per acre estimated from threshers' reports, 28.9 bushels. Total estimated product for 1893, 25,740,457 bushels. Potatoes.—Acres planted in 1893, 120,348 acres. Estimated average product per acre, 58 bushels. Total estimated product for 1893, 7,007,136 bushels. Affected by rot, 1 per cent. Buckwheat.—Prospect compared with a full average, 61 per cent. Clover seed.—Prospect compared with a full average, 74 per cent. The wheat acreage sown this fall for the harvest of 1894 is 6 per cent. less than was seeded last fall for the present year's harvest, in other words, 174,390 acres less. This shortage in area would represent in product, figuring on the same basis of production as resulted from this year's harvest, 2,999,508 bushels of wheat. Owing to the dry weather wheat seeding was very late and this, with the low price, may account for the slight reduction in area. The condition of the growing wheat is good, not so large as some years, but healthy and vigorous, and growing rapidly under the favorable weather. Corn, as indicated in the report of October 1, will be a short crop, in fact the shortest for a number of years, except perhaps the year 1890, when the average product per acre was but 24.5 bushels per acre. In some localities the corn is husking out better than was expected last month, so the general prospect has been slightly increased, but from the best information obtainable the result as an average for the state will not exceed 25 bushels per acre, and may fall even less than this. It is also true that there is considerable chaffy and soft corn that must be classed unmerchantable. Potatoes will average but 55 to 60 bushels per acre for the state, not much more than one-half the full average product. A small portion of Northwestern Ohio reports large yields, but these are more than offset by many localities where the crop is almost a failure. In some sections rot is also reported.

Grain men of Kansas City, Mo., are making elaborate preparations for their second annual banquet, which will be held November 28. Colonel N. P. Simonds, chairman of the committee on arrangements, is confident that the banquet will surpass any ever given in the city. Many prominent speakers and guests from abroad will be invited.

Barley malt amounting to 709 bushels, valued at \$848 was imported in September, with none imported during September, 1892; and during the nine months ending with September 2,294 bushels, valued at \$2,780, were imported, compared with 4,137 bushels, valued at \$4,818, imported during the corresponding months of 1892. Of imported barley malt none was re-exported in September, and none in September, 1892. There was none re-exported during the nine months ending with September, compared with 1,191 bushels, valued at \$830, re-exported during the corresponding months of 1892.



R. E. Moreland of Luverne, Minn., has charge of the new farmers' elevator at Magnolia, Minn.

William P. Brazer, a grain broker at Philadelphia, Pa., was recently married to Miss Frances M. Sowney.

Nathan C. Simons, one of the oldest grain dealers on "Change" at Buffalo, N. Y., retired on November 1 from active business.

John S. Martin, for several years grain inspector at Kansas City, Mo., was married on October 25 to Miss Martha Starr of Easton, Md. The marriage took place in Trinity Cathedral at Easton.

E. G. Preston, secretary of the Chamber of Commerce at Boston, Mass., on his return recently from his wedding trip was presented by the members of the Chamber with an elegant hall clock. The employees of the Chamber presented him with a silver tea service. It was an agreeable surprise for Mr. Preston, who responded to the presentation speeches made by the president of the Chamber, Edward Kemble.

Only twelve weeks and the winner of the guessing contest will be announced through the columns of these pages. What do you think of your chances? Anyway don't you think while you are in the grain business you ought to keep posted on matters pertaining to the trade? You can do this by reading the AMERICAN ELEVATOR AND GRAIN TRADE. See our guessing contest ticket on another page of this issue.

IMPORT AMERICAN CORN.

According to the last monthly report of the Bureau of Statistics, corn aggregating 42,356,726 bushels was exported during the nine months ending with September, compared with 65,274,289 bushels exported during the corresponding months of 1892. To the United Kingdom we exported 1,210,316 bushels in September, against 562,577 bushels exported in September, 1892; and during the nine months ending with September the exports aggregated 13,722,050 bushels, against 28,184,685 bushels exported during the corresponding months of 1892. To Germany our exports of corn amounted to 430,420 bushels during September, against exports of 117,634 bushels in September, 1892; and during the nine months ending with September the exports amounted 5,954,637 bushels, compared with 13,102,762 bushels exported during the corresponding months of 1892.

France received from us during September 152,106 bushels, against 12 bushels received during September preceding; and during the nine months ending with September France received 1,545,061 bushels, compared with 2,001,644 bushels received during the corresponding months preceding. Other countries in Europe received from us 342,531 bushels in September, against 122,797 bushels in September preceding; and during the nine months ending with September they took from us 6,496,778 bushels compared with 14,624,568 bushels during the nine months ending with September preceding. The British North American Possessions took from us 1,596,087 bushels during September, against 683,794 bushels in September preceding; and during the nine months ending with September they took from us 10,435,300 bushels, against 3,029,668 bushels in the corresponding months of the year preceding.

We exported to Mexico 1,905 bushels in September, against 1,013,879 bushels in September, 1892; and during the nine months ending with September the exports to Mexico amounted to 2,403,663 bushels, against 2,943,271 bushels during the corresponding months of 1892. We exported to the Central American States and British Honduras 143 bushels during the nine months ending with September, against 99,181 bushels exported during the same months of 1892. We exported to Cuba during the nine months ending with September 795,927 bushels, against 722,351 bushels exported in the same months of 1892. We exported to Puerto Rico 16,844 bushels during the nine months ending with September, compared with exports of 43,017 bushels during the corresponding months of 1892.

To Santo Domingo we exported 947 bushels during the nine months ending with September, compared with 4,618 bushels during the same months of the year preceding. To other West Indies and Bermuda the exports aggregated 441,387 bushels during the nine months ending with September, compared with 397,833 bushels exported during the corresponding months of the year preceding. To South America we exported 381,014 bushels during the nine months ending with September, against 102,067 bushels exported during the corresponding months of the year preceding. To other countries we exported 19,163 bushels during the nine months ending with September, compared with 18,601 bushels exported during the corresponding months of the year preceding.

Fires, Casualties, Etc.

F. Haller lost his elevator at Durant, Ia., recently, by fire.

The gin mill of Wilson Bros. at Ambia, Tex., has been burned.

The Eagle brewery at San Jose, Cal., was recently damaged by fire.

U. B. Lassitude's opportunity to get \$50 free was destroyed by procrastination November, 1893.

The elevator at Voss, N. Dak., containing 20,000 bushels of wheat was destroyed by fire on the night of November 11.

Alexander & Moss, dealers in grain and hay at Dallas, Tex., have been burned out. Loss \$5,000. Insurance unknown.

Two elevators at Varna, Ill., containing 40,000 bushels of grain were burned on the night of October 30. Loss \$45,000; insurance \$30,000.

P. J. Nett's grain elevator at Albany, Minn., was badly damaged by fire recently. A passing locomotive is the supposed cause of the flames.

One of the buildings of the linseed oil mills at Winnipeg, Man., filled with flaxseed, collapsed recently flooding the ground with its contents.

Napoleon Dupont was killed at Spofford, Tex., on October 26 by the collapse of a grain warehouse which contained over 40,000 bushels of grain.

P. A. Deyo's grain elevator and feed store at Yonkers, N. Y., was burned on the night of October 17. Loss \$100,000; insurance about \$50,000.

The elevator and roller mills of the Union Roller Mills and Elevator Company at Gallatin, Tex., burned recently. They will be at once rebuilt. Loss \$20,000; insurance \$7,500.

Cooper & Plum's elevator at Lyons, Mich., has been burned. Tramps are supposed to have been the cause of the fire. The loss is quite heavy, but is fairly well covered by insurance.

The Alliance elevator at Sanborn, N. D., was consumed by fire recently. It was partially filled with grain, which together with the elevator itself was owned by the farmers.

Harry, the six-year-old son of J. T. Rockwell of Mill Plain, Conn., met with a horrible death at his father's grain and feed store. He fell into a chute, was covered with grain and suffocated.

A serious accident happened at the Wilkeson elevator at Buffalo, N. Y., on October 13. One of the canal boat loading spouts of the elevator broke its swivel pin and fell to the dock, killing one man and slightly injuring George Phillips, the boss shoveler.

Fire destroyed the warehouses of F. Braasted & Co. and the Miller Brewing Company at Ishpeming, Mich., on the night of November 9. The loss of Braasted & Co. is estimated at \$20,000, with insurance of \$10,000. The Miller Brewing Company's loss is \$5,000, with small insurance.

The appraisers on the loss incurred in the Coatsworth elevator fire which occurred at Buffalo, N. Y., August 15, have completed the appraisal on the loss and fixed the amount upon the building at \$140,600, and upon the machinery at \$54,250, making a total of \$194,850. The whole amount of insurance on the elevator was \$205,500.

The Van Dusen elevator at Redwood Falls, Minn., early on the morning of November 5 was burned to the ground. The elevator contained nearly 15,000 bushels of wheat, 4,000 bushels of flax, 1,000 bushels of oats and 250 tons of coal. Nothing was saved. The total loss will reach \$20,000. Insurance is about one-fourth of that amount.

The farmers' elevator at Geneva, Ia., managed by Vene Parks, was destroyed by fire on the night of October 27. The building contained several hundred bushels of oats. The fire is supposed to have resulted from spontaneous combustion or to have been the work of an incendiary. It is estimated that the loss sustained by the shareholders will be over \$7,000.

W. A. Gurney & Co.'s hay, grain and feed store at New Bedford, Conn., was discovered to be on fire at 8:30 a. m., October 20. The fire started from the stove, and the building and contents were almost totally destroyed. The loss on the building was \$3,000. The loss on the stock will probably not fall below \$2,000, on which there was an insurance of \$800.

Somebody is going to get it. We mean the \$50 prize which we offer for the best guess. You may get it if you will seize the opportunity and send in your guess and subscription to the AMERICAN ELEVATOR AND GRAIN TRADE, which you will find you really cannot get along without after you have be-

come accustomed to its information, and have been benefitted by the valuable hints which are to be found in its pages. We are in daily receipt of letters from elevator men which inform us of that fact. Send in your subscription and guess.

DESTINATION OF OUR WHEAT EXPORTS.

The total number of bushels of wheat exported during the nine months ending with September, according to the latest report of the Bureau of Statistics, amounted to 89,165,302 bushels, against 91,466,112 bushels exported during the corresponding months of the year preceding. To the United Kingdom we exported 5,978,456 bushels during September, against 7,177,005 bushels in September preceding; and during the nine months ending with September the exports amounted to 47,565,185 bushels, against 48,423,049 bushels during the corresponding months of the year preceding. To Germany we exported 179,108 bushels in September, against 20,397 bushels in September preceding, and during the nine months ending with September we exported 2,161,910 bushels, against 5,452,776 bushels exported during the corresponding months preceding.

France received from us during September 1,759,919 bushels, against 383,816 bushels in September, 1892; and during the nine months ending with September France took from us 9,535,451 bushels, compared with 12,088,886 bushels received during the same months of 1892. Other countries in Europe took from us 2,975,539 bushels during September, against 2,400,730 bushels in September, 1892; and during the nine months ending with September they received from us 24,017,072 bushels, compared with 21,375,223 bushels during the same months of 1892. The British North American Possessions took from us 366,032 bushels during September, against 871,349 bushels in 1892; and during the nine months ending with September they took 5,448,111 bushels, compared with 4,003,238 bushels received during the same months of 1892.

We exported to the Central American States and British Honduras 34,333 bushels during the nine months ending with September, against 44,236 bushels during the corresponding months preceding. To the West Indies and Bermuda we exported 13,058 bushels during the nine months ending with September, against 5,822 bushels exported during the corresponding months preceding. The exports to Brazil during the nine months ending with September amounted to 16,026 bushels, compared with 51,551 bushels during the corresponding months preceding. To other countries in South America the exports amounted to 5,328 bushels during the nine months ending with September, against 5,897 bushels exported during the same months preceding.

Asia and Oceania received from us 9,028 bushels in the nine months ending with September, compared with 13,476 bushels received during the corresponding months of 1892. Africa took from us 353,277 bushels during the nine months ending with September, against 408 bushels during the corresponding months of 1892. Other countries received 6,523 bushels during the nine months ending with September, against 1,550 bushels received during the corresponding months of 1892.

A KENTUCKY GRAIN DEALER.

Every state has had its pioneer grain dealers, but few of the pioneers in the grain trade of the states east of the Mississippi River are still living. Kentucky's pioneer dealer is still living and is still engaged in the grain business at Louisville. His name is Adolph Brandeis. In 1855 he exported to New York the first bushel of wheat ever sent out of the state, which demand was made because of the crop failure in the great Genesee Valley, at that time the greatest wheat-producing land in all America. One year later he made the first wheat and rye shipment to Europe ever exported from Kentucky. It is seen at a glance, therefore, that Mr. Brandeis, with his forty years in the grain business of Louisville, is in no uncertain sense a veritable patriarch in the trade.

Mr. Brandeis was born in Prague, Austria, in 1822, but when twenty-six years old came to America and located in the "wild West" at Madison, Ind. In September, 1851, he went to Louisville, where he has been ever since prominent among the grain people of the city. In 1855 he formed a partnership under the firm name of Brandeis & Crawford. In 1872 the firm dissolved, Mr. Brandeis going temporarily to Europe. Just before, as well as during the civil war, this firm did by far the largest grain business in the Ohio and Mississippi valleys. In 1875 Mr. Brandeis returned and embarked in the cotton business under the firm name of Brandeis, Sanders & Co. In 1878 the present well-known grain firm of A. Brandeis & Son was started, it continuing to flourish to-day as one of the prominent business concerns.

Aside from his membership in the Louisville Board of Trade, Mr. Brandeis is in no way connected with any other business or enterprise, as he clings fondly to the old-time idea that a business man's principal object in life should be to give all his energy and time to his business to the end that he might always pay an even one hundred cents on every dollar.

WATERWAYS

Last year the Erie Canal carried 25 bushels in every 100 bushels of grain shipped East; this year the canal carried 40 out of every 100 bushels.

The British ship Owernee carried the first wheat out of Seattle, Wash., on October 23, which has been shipped from that port in three years.

Serious losses resulted from the wet grain cargoes of the steamers Tower, H. J. Johnson, and the schooner C. E. Leighton, all of which were out in the big gale of October 23.

The wheat cargo of the Mont Blanc had 4,729 bushels wet out of 21,000 bushels. The wet oat cargo of the schooner Amboy was sold at Buffalo, N. Y., on October 10, for 27 cents per bushel.

The schooner Hoboken, en route from Toledo, O., to Ogdensburg, N. Y., with a cargo of grain, went ashore in Alexandria Bay. She had on board 25,000 bushels of corn, part of which was a total loss.

Navigation was suspended for three days in the Beaharnasis Canal recently, owing to a break in the fourth lock. The part of the wall from which the lock took its support gave way. The accident occurred near Valley Field, Ont.

Owing to a leak in the bank of the Wellington Canal at Thorold, Ont., recently, the water was drawn off one level, stopping navigation through the canal. A large force of men were set to work and worked night and day until the bank was repaired.

The schooner James D. Sawycr went ashore recently on Lake Michigan near Little Island, and vessel and contents, consisting of a cargo of corn, are a total loss. Insurance on vessel and cargo was \$30,700. The cargo of corn was sold at Chicago for \$750.

Canal boats are receiving $4\frac{1}{2}$ cents on wheat with chances of the season's closing with rates advanced to 6 cents. The railroads have been so busy transporting people to the World's Fair that canal transportation has been a wonderfully paying business during the summer.

The Chicago Board of Marine Underwriters have advanced grain insurance rates to the following figures per \$100 to take effect from October 31: To ports on Lake Superior, \$1.05; Sarnia and Detroit River, \$1; Georgian Bay and Lake Erie, \$1.10; Lake Ontario and Ogdensburg, \$1.20; to Montreal, \$1.50.

If expectations are realized the Manchester ship canal will be opened for traffic by January 1. A line of steamers has been arranged to sail from New Orleans to Manchester direct, commencing with the "Venango" which will sail about December 10, and the "Ohio" which will sail about December 24.

The Montreal Transportation Company has completed a large barge at Kingston, Ont., which has a capacity of 55,000 bushels of grain. The repairs on the barges have been put off from time to time owing to a very busy season, but will be prosecuted during the winter. About 200 men will be employed.

The propeller Kate Butteroni from Chicago, Ill., loaded with 45,000 bushels of western barley consigned to E. M. Upton at Charlotte, N. Y., has discharged her cargo at his elevator in that village. The propeller Elphimere unloaded subsequently 50,000 bushels at the same port. A large number of consignments have been arranged for at that place.

The early closing of navigation will turn the grain shipments to the central traffic lines, which will do a large business. The only severe competition on export business is the line to Newport News. The new line of ocean steamships gives that port a new outlet. The differential enjoyed by this line gives it the first call on every pound of traffic for which it competes.

The total number of bushels of wheat which left the port of New Orleans, La., during October were 877,202, against 1,147,545 bushels in 1892. Corn aggregating 148,283 bushels was shipped from the same port during October, compared with 3,150 bushels in October, 1892. Oats amounting to 23,110 bushels were shipped during October, and none were shipped during October, 1892.

The St. Clair and Lake Erie Ship Canal Construction Company has been organized under the laws of the state of Wisconsin, with a capital amounting to \$4,000,000. It is the intention of the construction company to extend the canal from the southeastern corner of Lake St. Clair to a point southeast of Point Pelee on Lake Erie. The company has offices in Duluth, Milwaukee, Detroit and Tilbury Center, Ont.

The receipts of grain by lake at Buffalo, N. Y., during the twenty-four hours ending at 1 p. m., October 10, amounted to 1,803,863 bushels, not including 60,032 barrels of flour, which, if counted as wheat, would make a total of 2,104,023 bushels. There were 462,000 bushels of wheat, 965,954 of corn, 181,909 of oats, and 194,000 of barley. There were also 88,000

bushels of flaxseed, which if added to the total grain and flour, would make the receipts of a single day foot up 2,192,023 bushels. This is the largest receipt of grain by water in twenty-four hours at that port, and estimated to be the largest at any lake port.

The whaleback boats have now been on the lakes five years, and during that time not one has been wrecked by storms, and the barges have shown that they can outlive a gale which breaks up every tow in its path. The assertion has lately been made that whalebacks were structurally weak. According to the foregoing fact such a statement does such a remarkably successful type of boat a material injustice.

A grain blockade developed the last of October at Buffalo, N. Y., and boats were compelled to await their turn at the elevators. On October 23 forty-seven cargoes were waiting to be unloaded. The grain could not be sent out as fast as it came in, partly because there was a scarcity of canal boats and the railroads had allowed their ears to be scattered when comparatively few of them were needed during the summer.

The test recently made on the Beauharnais Canal of the closing of the lock gates by electric motors has proved successful, and it has been decided to adopt the electric power for the lock gates of the nearly completed Soulages Canal on the St. Lawrence River. It has been found, wherever electricity has been used for closing the lock gates, that the operation which formerly took four men four minutes to accomplish can now be completed by the motors with the greatest ease in about one minute.

During the month of October the movement of grain vessels from the ports of California en route for Europe was not as rapid as expected. An average of a cargo clearance each day was not made. This is accounted for, however, by the unsatisfactory condition of the English market. The net decline for the month was fully 6 pence (12 cents) per quarter. Between the 1st of July and the 31st of October there were 93 ships cleared with grain from California direct for Europe. With four unreported vessels that cleared in June and two in November there are nearly 100 cargoes now on their way to Europe. From the first of November arrivals in Europe are expected to be frequent.

Latest Decisions.

Action Against Carriers for Loss of Goods.

In an action for the loss of goods a petition alleging that the goods had been delivered to a railway company and were in its custody, by virtue of a contract of shipment, and that while in its custody they were destroyed by fire, is sufficient, without any allegation as to the issuance of a bill of lading.—*Martin vs. Ft. Worth & D. C. R. Co., Court of Civil Appeals of Tex., 22 S. W. Rep. 1007.*

Right of Principal to Trace Fund Received from Sale of Goods.

Where a commission merchant deposits in a bank the proceeds of goods shipped to him for sale, and dies, insolvent, before remitting to the shipper the amount due him, the shipper is entitled to satisfaction of his claim out of the fund to the merchant's credit, as against the claim of the bank on an unmatured note discounted by it for the merchant.—*Ewart vs. Bank of Monroe, Supreme Court of New York, 23 N. Y. Supp. 1124.*

Authority of Agent to Bind Principal.

Where a principal authorized a broker to sell 1,600 bushels of barley, at \$1.50 per hundred pounds, net, in Detroit, Mich., a contract of sale by the broker at 80 cents per bushel of 48 pounds, to be delivered in New York at the rate of 2,000 bushels per week, payment to be made as soon as each shipment should arrive, is not within the authority and cannot be enforced against the principal.—*Nester vs. Craig, Supreme Court of N. Y., 23 N. Y. Supp. 948.*

Liability of Telegraph Company for Delay.

In the case of the Western Union Telegraph Company vs. Lyman, the Court of Civil Appeals of Texas held that the acceptance of a dispatch by a telegraph company from a connecting line in the usual course of business, for transmission over its own line, creates an implied contract with the addressee, to exercise reasonable diligence in transmitting the message to its destination, and delivering it to the addressee, and it is liable to him for negligence in failing to do so.

An elevator at Ellsworth, Minn., on October 25 was loaded with 65,000 bushels of 40 cent barley. This would have entailed, if marketed at that time, a net loss of \$1,000.

PRESS COMMENT.

PRICE OF WHEAT IN FAT HOGS.

If the price of corn continues to be good, and wheat low, it will bring about a revolution in making pork, for wheat will be more largely fed than ever. As we have already stated some care and caution should be exercised in this new feeding. Cornmeal mixed with chopped wheat is no doubt better than wheat alone. The present price of hogs in Chicago market is 6 cents, which on the above basis would make wheat worth \$1.35 per bushel.—*Indiana Farmer.*

FARMERS WANT TO SPECULATE WITH OTHER MEN'S MONEY.

We do not believe that the appeal of the wheat men to wholesalers to carry country merchants in the interest of the farmers should receive favorable consideration. Both wholesaler and retailer have suffered enough already and there is no good reason why they should enter into a combine to force the price of wheat above the market price. The farmer is always slow, always expects a fictitious price and has already held wheat that could have been sold to good advantage. Let the wheat move and let the money be put in circulation for the benefit of trade.—*Trade Register, Seattle.*

MINNESOTA STATE ELEVATOR CASE.

Judge Willis decided the case brought to enjoin the railway and warehouse commission from building the elevator provided for by the last session of the legislature against the plaintiff. He held that this is a legitimate exercise of the police power of the state, whose exercise is left to the discretion of the legislature. The police power is getting to be a very elastic term, and if it continues to give such proofs of its elasticity, it will in time stretch to cover any invasion of the rights of the citizen which may seem desirable to that imperial and autocratic body, the legislature.—*St. Paul Globe.*

ROOT CROPS FOR FEEDING.

Root crops are cutting more of a figure in the economy of the farm in this country each year. Dairy-men and sheep breeders have found that the feeding of roots is a decided advantage in their business, and feeders of fat stock are awakening to the fact that the putting on of flesh can be done better by a mixed ration than by the use of grain alone. A stockman with a liberal supply of mangels, turnips, carrots, etc., is in much better position to feed to advantage than if he had nothing but grain to depend upon. After a crop of roots is once harvested and conveniently stored it is easily fed. If only enough are secured to afford a change in the bill of fare occasionally the benefits will be great enough to pay for the trouble and time in securing them. In many of the foreign countries feeders do not think their stores of feed for the winter complete without the root cellars or bins are full.—*National Stockman.*

DEMAND FOR FEEDING CATTLE IN NEBRASKA.

For feeders there has been an unusual demand for the last six weeks. It seemed to be impossible to get enough to supply the demand. This demand comes principally from Nebraska and Iowa. The farmers are doing most of the buying. They have their cribs still well filled with old corn, and the prospect is good for a big crop of the new. These facts, together with the belief that corn-fed cattle will bring a good round price in the spring, has stimulated an army of them to reach out and gather in all the feeders they can get hold of. In speaking of the demand for feeders, a stockman said: "It was about three years ago that the farmers became disgusted with the feeding business and began selling off all their heifers as well as steers. It got so there was no money in feeding, and the corn was hauled off to market as soon as it was picked. But things have changed since then, and the farmer can now see more money in fattening a bunch of three-year-olds than he can in selling his corn."—*Omaha Bee.*

TRIALS OF HAY EXPORTERS.

It is stated by shippers here that a number of contracts made by Liverpool and London firms were repudiated when the hay arrived at destination, on the flimsiest pretexts imaginable. This is usually the case when the English market goes the wrong way, so that those who sell direct on a c.i.f. basis are no better off than those who ship on consignment, if indeed they fare as well. If one-half be true that is alleged against hay men on the other side, their idea of commercial probity is certainly not of the highest order. Of course considerable hay has been sent to men on the other side who should never have solicited a bale. Some of these firms were compelled to put it into the hands of regular handlers of hay before they could work it off, thus entailing double commissions for the consignors on this side. Then again in other instances

the returns were so glaringly unfair that suits were taken out in England by parties on this side to recover their just dues. Some of our exporters have had to pay pretty dearly for their initiation fees, in order to duly qualify them for taking their degrees as exporters of dried grass.—*Montreal Trade Bulletin.*

A LOWER WEIGHT FOR SMALL CARS.

We are in receipt of numerous complaints from shippers bearing on the shortage of box cars, at the busy season of the year, that will hold the minimum weight required by railroad companies. The required weight is 20,000 pounds, but it is impossible to load that amount of hay into the short cars, 16,000 pounds being about the limit. If the railroad companies will not furnish large cars they should make the minimum 16,000 when short cars have to be used, anyway. This, we think, would be no more than just or right. And we suggest that shippers might, with a little concerted action, bring enough pressure to get some satisfaction on this line.—*Haymen's Gazette.*

CANALS.

A strong public feeling is rising all over the commercial world in favor of canals for transportation service, especially for all kinds of heavy, bulky freight. In the previous history of such transportation lines the slow speed of vessels on such waterways has been a main standing strong objection, and when railroads were brought into common use in transportation service against canals the water routes were shelved, and for a good many years past the canal system has been kept in the background as a transportation system. Within the past few years it has been plainly demonstrated that the waterways and the railroads will both be needed from this time forward to handle with promptness the enormously heavy internal commerce that is now rapidly swelling in our country. As to the matter of canal boat speed, the canal prisms can be constructed in a manner to allow canal boats in a common way to make just as great speed as is commonly made by the freight trains on the railroads.—*Drover's Journal.*

OUR CARD BASKET

We have received calls from the following gentlemen prominently connected with the grain and elevator interests, during the month:

- A. F. Brown, Sibley, Ia.
- L. G. Vincent, Odell, Ill.
- A. Poliakoff, Moscow, Russia.
- B. Irwin of Oakes & Irwin, Decatur, Ill.
- Geo. Gardiner of J. J. Blackman & Co., New York City.
- D. A. Robinson of Simpson & Robinson Co., Minneapolis, Minn.
- Wm. Ebert, representing the Edw. P. Allis Co., Milwaukee, Wis.
- F. Prinz of Prinz & Rau Manufacturing Company, Milwaukee, Wis.
- N. E. Sherer, Minneapolis, Minn., representing S. Howes, Silver Creek, N. Y.
- David Greene, secretary and treasurer Case Manufacturing Company, Columbus, O.
- L. S. Hogeboom, Minneapolis, Minn., representing the Knickerbocker Company, Jackson, Mich.
- W. W. Huntley of Huntley, Cranston & Hammond and Huntley & Hammond, Silver Creek, N. Y.

SEED EXPORTS.

The last report of the Bureau of Statistics shows that clover, cotton, flaxseed or linseed, timothy and all other seeds valued at \$853,739 were exported during September, against exports valued at \$513,614 in September, 1892; and during the nine months ending with September the exports of seeds were valued at \$2,499,749, compared with amounts valued at \$3,021,173 exported during the corresponding months of 1892. Clover aggregating 4,027,054 pounds were exported in September, against 59,840 pounds in September, 1892; and during the nine months ending with September 7,281,049 pounds were exported, compared with 6,083,157 pounds exported during the corresponding months of 1892. There was no cotton seed exported in September, and none in September, 1892; and during the nine months ending with September 2,039,251 pounds were exported, compared with 6,998,982 pounds exported during the corresponding months of 1892.

Flaxseed or linseed aggregating 278,076 bushels was exported in September, against 395,328 bushels in September, 1892; and during the nine months ending with September 821,684 bushels were exported, compared with 1,783,813 bushels exported during the corresponding months of 1892. Timothy seed amounting to 319,880 pounds was exported in September, compared with 305,004 pounds exported in September, 1892; and during the nine months ending with September 5,759,930 pounds were exported, compared with 7,328,449 pounds exported during the corresponding months of 1892.

THE MARKETS.

We will be pleased to publish under this head short reviews of the conditions ruling in the different markets. Copy must reach us by the morning of the 14th of each month.

BARLEY AT CHICAGO.—H. Mueller & Co. report the barley market for the past 30 days, very steady although receipts have been very liberal. The thin light weight goods sold well to feed dealers at from 35¢ to 40 cents per bushel, and there seems to be a ready outlet for such goods, and considerable is said to be for export. Malting grades have ranged from 40¢ to 55 cents from common to choice, and above for fancy. Receipts lately have been much smaller, but demand also less active as shipments by water cannot be made much longer. If receipts do not become excessive we look for a steady market for the next 30 days.

HAY AT LOUISVILLE.—Callahan & Sons report the following as the condition of the hay market at Louisville, Ky., for week ending November 11: "We cannot note any improvement in the condition of the hay market during the past week. Receipts of hay have continued liberal, and some difficulty has experienced in selling the lower grades of hay, and there is a decidedly lower tendency on these grades. When it comes to first-class timothy hay we report a steady demand, and prices have been pretty well sustained on these grades. We quote No. 1 ruling \$12@12.50; No. 2 \$10@11; mixed hay \$8@9. No demand for Prairie hay."

HAY AT CHICAGO.—M. M. Freeman & Co. report the hay market during the past month as ruling steady, and without material changes, prices not varying over 50 cents per ton. Offerings of both timothy and prairie are liberal, and have been so continuously, and it is wonderful how absorbent our market is to take it all, for comparatively little of it is shipped out. Prices current November 11, are as follows: **TIMOTHY.**—No. 1 \$10½@11; No. 2 \$9½@10; mixed \$8@9. **PRAIRIE.**—Choice Iowa Upland \$8¼@8½; good Iowa Upland \$7½@8; good feeding hay \$6½@7. **STRAW.**—Rye \$7¼; oat and wheat \$5. Indications are that the values will rule comparatively low this fall and winter, as the crop has been large, and the financial conditions are such as to, oftentimes, compel its shipment when the market is not in favorable condition.

WEEKLY GRAIN REPORT OF L. NORMAN & CO. LTD., London, Eng., October 30. We have again to report dull and quiet markets. Notwithstanding the low values now ruling, operators have no inclination to speculate, and confine their attention to the heavy stocks on hand, which continue abnormally heavy. Until these stocks are considerably reduced they must naturally act as a check to any improvement, and the general impression in grain circles here is that values will not improve until after Christmas. American markets still fail to give any assistance to this side, remaining in a weak and unsettled state. This will no doubt continue until the visible supply somewhat decreases, and the silver question is finally settled. In the meantime their wheats are held too high for this market, restricting the export business, and buyers here continue to turn their attention to the Russian wheats, which are offering much cheaper, and in which a large trade is being done to Liverpool and London. Business in Canadian grain is restricted owing to scarcity of freight. Shippers offer but sparingly, and hold values far above buyers' ideas, thus preventing any chance of business in this class of grain. **HARD MANITOBA.**—Firmly held, but meet with little demand. Early in the week 27s c. i. f. London was taken for No. 1 November shipment, but sellers have since raised their pretensions and hold for 27s 6d to 27s 9d c. i. f. with buyers at 27s to 27s 3d. **HARD DULUTH.**—Business has passed during the week at 26s 10d, and 27s c. i. f. London. To-day shippers ask 27s 9d c. i. f. October, November, but no buyers thereat. **MAIZE.**—Good inquiry and dealer. Business has been done during the week from 19s 7½d to 20s—the latter price being paid to-day. **BARLEY.**—English malting barley has ruled somewhat quieter this week, but grinding qualities continue firm for shipment, although dull on passage. Californian brewing would come at 23s 3d c. i. f. per 448 pounds. **PEAS.**—Steady, but shippers hold values above the market, and business is restricted. To London sellers ask 25s 6d, with buyers at 25s. Liverpool and Glasgow show no change. **OATS.**—Firm. No. 2 Mixed American are quoted at 16s 6d, but buyers do not respond. Canadians not offering. **HAY.**—Business has been confined to parcels near at hand, forward shipments being somewhat neglected. For shipments November, March sellers ask 45s 5s to 45s 3d with buyers at 45s 0s 6d to 45s 5s.

IMPORTS AND EXPORTS OF FOREIGN BREADSTUFFS.

The total value of the breadstuffs imported during September was \$51,552, compared with an amount valued at \$76,937 imported during September, 1892; and during the nine months ending with September breadstuffs valued at \$1,190,607 were imported, compared with an amount valued at \$1,729,962 imported during the corresponding months of 1892. Barley amounting to 1,780 bushels was imported during September, against 27,927 bushels in September preceding; and during the nine months ending with September 780,785 bushels were imported, against 932,478 bushels in the corresponding months of the year preceding. There were 1,722 bushels of corn imported during the nine months ending with September, compared with 880 bushels during the corresponding months of the year preceding.

Oats aggregating 17,088 bushels were imported during the nine months ending with September, compared with 14,396 bushels imported in the same months preceding. There were 8,505 bushels of rye imported during the nine months ending with September, compared with 110 bushels imported during the same months of 1892. Wheat amounting to 275 bushels was imported in September, against 16,783 bushels in September, 1892; and there were 302,920 bushels imported during the nine months ending with September, compared with 1,022,380 bushels in the same months of 1892. Wheat flour amounting to 290 barrels was imported during the nine months ending

with September, compared with 495 barrels imported during the corresponding months of 1892.

Of imported barley we re-exported 28,983 bushels during the nine months ending with September, compared with \$6,505 bushels re-exported during the same months of the year preceding. No oats were re-exported in the nine months ending with September, against 3,073 bushels during the corresponding months preceding. No rye was re-exported during the nine months ending with September, compared with 4,175 bushels in the same period of the year preceding. Wheat aggregating 197,177 bushels was re-exported during the nine months ending with September, compared with 1,740,907 bushels re-exported during the corresponding months of the year preceding.

HAY IMPORTS EXCEED EXPORTS.

The last report of the Bureau of Statistics shows that hay aggregating 4,185 tons, valued at \$38,336, was imported in September, against 5,059 tons, valued at \$50,126, in September preceding; and during the nine months ending with September 78,243 tons, valued at \$725,942, were imported, compared with 59,233 tons, valued at \$584,247, during the corresponding months preceding.

Hay amounting to 2,845 tons, valued at \$44,749, was exported during September, against 2,564 tons, valued at \$39,934, in September preceding; and during the nine months ending with September 29,831 tons, valued at \$477,591, were exported, compared with 26,233 tons, valued at \$430,135, exported during the corresponding months of the year preceding.

Of imported hay 9 tons, valued at \$95, were re-exported during September, against none re-exported in September, 1892; and during the nine months ending with September 120 tons, valued at \$1,125, were re-exported, compared with 151 tons, valued at \$1,387, re-exported during the corresponding months of 1892.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY.

General offices: 160 and 172 Adams street, Chicago. Industrial Department.

The Chicago, Milwaukee & St. Paul Railway Company's 6,150 miles of road traverses a vast territory, rich in all the resources that insure industrial success.

The industrial department is conversant with the iron, coal, lumber and tanbark, the water power (both river and artesian) for factory and electric power purposes, the markets, the transportation and financial facilities, and other interests on the line pertaining to industrial development, and disseminates information concerning same.

A number of new factories have been induced to locate—largely through the instrumentality of this company—at enterprising towns on its lines.

As the interest of the company is to secure the location of industries at places where the surroundings will insure their permanent success, the information furnished a particular industry is pertinent and reliable.

In the Eastern states, and in other parts of the world, factories are so congested and distant from the actual market as to result in fierce and destructive competition. That the West is taking a place as one of the great manufacturing territories of the world is forcibly impressing itself upon discerning and enterprising manufacturers. Steps should be taken by such while the field is as yet not fully covered, and while inducements are still being offered to locate in the West.

Individuals or companies wishing to embark capital in Western industry can find a profitable field.

For particulars relative to industrial advantages on the line, address

LUIS JACKSON,
Industrial Commissioner,
C., M. & St. P. Ry., 160 Adams street, Chicago, Ill.

B. & O.'S NEW THROUGH LINE.

PREPARING FOR THE IMMENSE TRAFFIC INCIDENT TO THE WORLD'S FAIR.

The management of the Baltimore & Ohio Railroad is preparing for an immense business in 1893, while the World's Fair is open in Chicago. The terminals at Chicago are capable of accommodating a much heavier traffic than is now being done, and important changes are being arranged for the handling of very heavy freight and passenger business to the West from New York, Philadelphia and Baltimore. New equipment for largely increased passenger business and an extensive stock of freight cars have been ordered. The various roads of the system will be improved by straightened lines, reduced grades, extra side tracks and interlocking switches. The new line between Chicago Junction and Akron has shortened the distance between Chicago and tidewater twenty-five miles, and between Pittsburg and Chicago fifty-eight miles.

The distance between Chicago and Pittsburg and Chicago and Cleveland by the construction of the Akron line and the acquisition of the Pittsburg & Western line and the Valley Railroad of Ohio is about

the same as via the Lake Shore from Cleveland to Chicago, and by the Pennsylvania from Pittsburg to Chicago. The alignment is to be changed and grades reduced to a maximum of twenty-six feet. It is expected that within twelve months the old Baltimore & Ohio through line between Chicago and the Atlantic Ocean will have passed away and the new line via Pittsburg be established, with no greater grades or curvature than on any of the trunk lines.

Work has already begun east of Pittsburg to meet improvements making west of Pittsburg. These improvements will consist of additional second and third tracks, a general correction of the alignment and completion of the double track on the Metropolitan Branch. It is expected that the new through line will be ready simultaneously with the completion of the Belt Line through the city of Baltimore, which is intended to unite the Washington branch with the Philadelphia division and do away with the present line via Locust Point. Forty new and powerful locomotive engines were added to the equipment during the last two months, and others are in process of construction. The permanent improvements now under way and in contemplation involve the expenditure of some \$5,000,000.—*Baltimore American.*

VALUABLE BOOKS FOR GRAIN DEALERS.

The following standard works will be sent, postage paid, on receipt of prices given:

ROBINSON'S TELEGRAPH CIPHER.—The publishers have recently revised this excellent work, and we are now prepared to supply the trade. Cloth binding, \$1.50; leather.....\$2.00

WEIGH BOOKS.—Containing 125 perforated leaves with four weigh tickets and four stubs to each leaf, well printed upon good paper. The books are well bound. Copies will be mailed to any address for \$1.00

CLARK'S VEST-POCKET GRAIN TABLES.—A very useful and handy little book for grain buyers: to be used in reducing to bushels any quantity of grain or seeds up to 100,000 pounds. Size 2½ by 8½ inches, 16 pages. Leatherette.....75c

KINGSLEY'S DIRECTORY is the only complete work containing the name and address of every firm engaged in the following lines of business: Milling, grain, flour and feed, hay and straw, butter and eggs, fruit and produce, malting, brewing, distilling and poultry. Over 500 pages, octavo, substantially bound in cloth. Indispensable to those who wish to reach the lines of business named above. Price.....\$3.50

TELEGRAPH CIPHER AND DIRECTORY TO NEW ENGLAND TRADE.—A new guide to earload buyers of grain throughout New England. A list of those engaged in the grain, feed and flour trade. Western grain shippers and millers wishing to do business in this territory will find this directory invaluable. The telegraph cipher has met with favor and is highly recommended by users. In fact the code part of the book is considered by many shippers superior to any other in use. It is modern and practical, a great money saver and will prevent mistakes. Nicely bound in leather,.....\$3.00

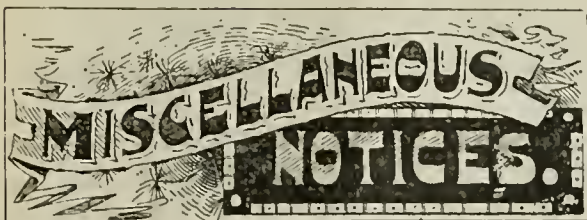
POUNDS TO BUSHELS.—These tables which show the number of bushels in any quantity from 20,000 to 70,000 pounds were compiled for the Chicago Grain Inspection Department. They are well printed on good paper and conveniently arranged for quickly finding the number of bushels in a earload. Each book contains ten leaves and each leaf is indexed at margin and printed on one side only. Each book is neatly bound in cloth. They will save clerks much labor and prevent errors in reduction. Price for "OATS," \$1.00; "BARLEY," \$1.00; "CORN AND RYE," \$1.00. The set.....\$2.50

DAVIS GRAIN TABLES.—These tables give the value of any number of bushels of produce weighing 60 pounds to the bushel from 25 cents to \$1.25 per bushel, and the value of any produce weighing 32, 48 and 56 pounds to the bushel at 15 cents to \$1.50. The book also contains Davis' Dockage Table, which gives the amount to dock any load of wheat up to 600 bushels at 1½ to 5 pounds' dockage. The book contains 219 pages of tables, printed on good paper, with large type, and well bound in cloth. The book is a new publication, and the arrangement of the tables is much more convenient than in some of the old publications. Price.....\$1.25

CLARK'S GRAIN TABLES.—This work is published in several different forms, for use in different lines of business. In these tables pounds are reduced to bushels, so that a buyer can quickly determine the correct number of bushels in a load without doing any figuring. Their use effects a saving every day of more than time enough to pay for them. The edition intended principally for reducing team scale weights to bushels contains nine tables, and is bound in paper. Price 50 cents. This will be found invaluable to country buyers. A new edition, intended for shippers and commission merchants, reduces any quantity up to 64,000 pounds to bushels. It contains 16 tables, and is neatly bound in cloth. Price.....\$1.50

For any of the above, address

MITCHELL BROS. CO., 181 and 186 Dearborn street, Chicago, Ill.



DAVIS GRAIN TABLES.

The value of wheat or any grain at 60 pounds to the bushel, for any amount less than 100 bushels is shown without addition or multiplication, and for any amount over 100 and under 1,000 bushels, with but a single addition; at any price from 25 cents to \$1.25 per bushel. The value of bushels and pounds of other grain also is shown at 56, 48 and 32 pounds to the bushel at any price from 15 cents to \$1.50 per bushel. Price, postpaid, \$1.25. Address

E. D. DAVIS, Room 63, Chamber of Commerce, Minneapolis, Minn.

DEMUTH CHECK BEAMS.

We don't know of a better proof of the value of Demuth's Check Scale Beams than the fact that as conservative a concern as the Detroit Union Depot Elevator Company, after using these beams in their new elevator, shipped all the beams in their old elevator to the factory and had them changed to Check Beams. And a number of other elevators have done the same thing. These beams are furnished only with Fairbanks' Scales. For circulars giving full particulars address

J. A. DEMUTH, Oberlin, Ohio.

DIRECTORY OF GRAIN DEALERS.

Kingsley's Directory is the only complete work containing the name and address of every firm engaged in the following lines of business: Grain, milling, flour and feed, hay and straw, butter and eggs, fruit and produce, malting, brewing, distilling and poultry. New edition, thoroughly revised. Over 500 pages octavo, substantially bound in cloth. Indispensable to those who wish to reach the lines of business named above. Price \$3.50. Sent postpaid on receipt of price. Address

LEE KINGSLEY & Co., Syracuse, N. Y.

NEW ENGLAND TELEGRAPH CIPHER AND DIRECTORY.

Jennings' New England Telegraph Cipher and Directory contains the names of 1,400 carload buyers of flour, grain, feed, etc., which alone is worth five times the price of the book. Many of the principal millers and shippers West, jobbers and retailers East are using the "Cipher." As to its merits see circular issued November 1, showing names of firms using the Cipher. Sent on application. Cipher is pocket size, nicely bound in morocco. Price \$3.00. Sent postpaid on receipt of price. Address

HENRY JENNINGS, 613 Chamber of Commerce, Boston, Mass.



FOR SALE CHEAP.

One good No. 0 Victor Corn Sheller and Cleaner combined. Nearly as good as new. Address
W. R. NOWELS & SON, Rensselaer, Ind.

AKRON ENGINE FOR SALE.

One Akron Slide-valve Engine, cylinder 16x30, for sale. This engine shows by cards taken that it has developed 124-horse power. Rated capacity 80 to 100-horse power with steam at 80 pounds. Guaranteed in perfect working order. We have purchased another engine of the same parties, of larger capacity, so as to handle our electric light department, which has been added to the oatmeal business. Will be sold at a bargain. Prompt shipment. Address

MUSCATINE OATMEAL COMPANY, Muscatine, Ia.

KANSAS ELEVATOR.

Will sell or trade elevator in state of Kansas, in good condition; in a good part of the state; three railroads. Will sell for cash or trade for stock of goods or land in Illinois. Address

H. C. RUNGE, Nokomis, Ill.

SPLENDID SHEEP AND CATTLE RANCH.

A splendid sheep and cattle ranch for sale with about 1,000 cattle and 3,000 sheep; fine water, good buildings, rich meadow land; unlimited range, always a payer. Address

O. M. HOPKINS, attorney and investment agent, Grand Forks, N. D.

STANDARD RUBBER BELTING.

A large lot of extra standard Rubber Belting, all sizes, at 70 per cent. discount off list. Freight prepaid to points east of the Mississippi River on lots of one hundred pounds and upward. Address

R. B. CORBETT, 5 North Second street, St. Louis, Mo.

GRAIN AND STOCK LANDS FOR SALE.

Safe and profitable investments in the grain and stock lands of Central South Dakota, in the Missouri River country and tributary to the capital of the state; selected lands, \$5 to \$10 per acre. Address

WILLIAM W. WAITE & Co., Blunt, S. D.

SECOND-HAND MACHINES.

One No. 3 Barnard & Leas Warehouse Dustless Wheat Separator and one No. 5 Excelsior Oat Clipper, Separator and Grader combined; both machines in good condition, about as good as new, for sale cheap. Address

IRVING W. FOX, Rochester, Minn.

SECOND HAND BOILERS CHEAP.

Three second-hand horizontal tubular boilers nearly as good as new, 4 feet in diameter, 12 feet 9 inches long, with 48 3-inch tubes, with all fixtures and castings complete. One single boiler and two in a pair. Cheap. Address

J. S. MUNDY, Newark, N. J.

SECOND-HAND CORN AND COB CRUSHER.

One R. C. McCulley No. 24 Corn and Cob Crusher, with shaft seven feet long and coupling; 42x5 pulley, hopper and press pulley, all complete, ready to set up; drives from above, runs 30 to 60 revolutions and prepares corn and cobs for burrs, at 30 to 40 bushels per hour, using $\frac{1}{2}$ to 1-horse power; does not leave all the cobs to the last, but thoroughly mixes it; is a high-class crusher and cost \$24 new at Lancaster, Pa.; is as good as new, and will sell all complete for \$20 f. o. b., Covington, O. Would cost new \$35. Address

J. B. KINDELL, Box 392, Covington, Ohio.

FOR SALE.

THREE GRAIN ELEVATORS

In Western Iowa on C. & N. W. R. R.

MARTIN D. STEVERS & CO

COMMISSION MERCHANTS,

218 La Salle St., - CHICAGO.

BAGS! BAGS!!

For Grain or Anything.

Burlaps and Cotton Bags, Twine, etc.

Manufactory and Office:
Near Board of Trade,

W. J. JOHNSTON, 182 Jackson Street, CHICAGO, ILL.

TO POULTRY RAISERS.

The Complete Poultry Manual is a neat little work which is well worth reading by those interested in poultry, or by boys or girls who want to turn an honest penny. The price is only 25 cents. Sent postpaid on receipt of price. Address

MITCHELL BROS. CO.,

184 Dearborn Street, Chicago, Ill.

ORDER YOUR COAL FROM



CHICAGO OFFICE, 355 Dearborn Street.

COMMISSION CARDS.

SMITH, HIPPEN & CO.,

GRAIN

Receivers and Shippers,

BOARD OF TRADE BUILDING,

PEORIA, ILL.

CINCINNATI, OHIO.

WHY NOT? Ship your Grain and Hay to a Strictly Commission House.

COLLINS & CO.,

CINCINNATI, OHIO.

REFERENCES:
Market National Bank,
Commercial Agencies.

PEORIA COMMISSION CO.,
(INCORPORATED \$10,000.00)

SPECIALTIES:

Distillery and Horse Hay,

806-808 South Adams Street, - PEORIA, ILL.



F. H. Peavey & Co.

GRAIN
RECEIVERS.

Minneapolis,

Minn.

Consignments Solicited.

MILLING WHEAT A SPECIALTY.

T. D. RANDALL. ESTABLISHED 1852. GEO. S. BRIDGE.

T. D. RANDALL & Co.,
GENERAL

Commission Merchants,

GRAIN, HAY AND FLOUR,

219 South Water Street, CHICAGO.

H. B. SHANKS. Established 1873. S. H. PHILLIPS.

SHANKS, PHILLIPS & CO.

Commission Merchants,

Hay, Corn, Oats, Bran, Chops,
Flour and Corn Meal.

306 Front Street, Memphis, Tenn

Refer to Union and Planters' Bank.

CASH ADVANCES ON B. OF L.

References: People's Savings Bank, or Woolner Bros., Distillers.
LIBERAL ADVANCES ON CONSIGNMENTS.

SHIP M. M. FREEMAN & CO. HAY
COMMISSION
HAY, GRAIN, STRAW, HAY

14 and 16 Pacific Avenue, CHICAGO, ILL.

Correspondence and consignments solicited.
Market reports furnished on application. Mention this paper.

COMMISSION CARDS.



Robert McKnight & Sons,
Commission Merchants,

AND DEALERS IN

GRAIN, FEED and HAY,
2106 and 2108 Market Street, PHILADELPHIA.

REFERENCES: Merchants' and Third National Banks,
PHILADELPHIA.

Grain for Seed, Feed and Milling.

E. R. ULRICH.

E. R. ULRICH, JR.

E. R. ULRICH & SON,

Western Grain Merchants

And Shippers of Choice Milling White or Yellow Corn,

Also Mixed Corn, White Oats, Mixed Oats and Choice Red Winter Milling Wheat. Elevators and Storage along the Line of Wabash Ry., J. S. E. Ry., C. & A. Ry., and St. L. C. & C. P. Ry. in Central Illinois.

Office, Sixth Floor, Illinois National Bank.

SPRINGFIELD,

ILLINOIS.

LEMAN BARTLETT.

O. Z. BARTLETT.

L. BARTLETT & SON,

Grain and Produce Commission Merchants

BARLEY a Specialty.

Room 23, Chamber of Commerce Bldg, Milwaukee, Wis.

Careful attention given to orders from Brewers, Malsters and Millers.

ESTABLISHED 1861.

EDWIN B. DUSENBERRY.

Commission Merchant

AND WHOLESALE DEALER IN

HAY, STRAW AND GRAIN,

N. Y. CENTRAL & HUDSON RIVER and W. SHORE R. R. HAY DEPOTS.

OFFICE: { No. 1 N. Y. Hay Exchange, } NEW YORK.
{ 33d St. and 11th Avenue, }

JAMES R. TURNER.

CHRISTIAN F. MILLER.

JOHN T. MORRIS

ISAAC H. REED & CO.,

Commission Merchants,

FOR THE SALE OF

FLOUR AND GRAIN,

222 Produce Exchange, - New York City.

CONSIGNMENTS SOLICITED.

D. C. STEWART.

Grain and Commission,

Proprietor IRON CITY GRAIN ELEVATORS,

Capacity, 300,000 Bushels.

LIBERAL ADVANCES ON ALL CONSIGNMENTS.
CORRESPONDENCE SOLICITED.

Office, 1019 Liberty Street, - PITTSBURGH, PA.

ESTABLISHED 1871.

COMMISSION CARDS.

J. J. BLACKMAN.

G. W. GARDINER.

J. J. BLACKMAN & CO.,

Commission Merchants,

Wheat, Corn Oats, Bran, Middlings, Screenings,
Hay, Seeds, Beans, Peas and Corn Goods.

95 Broad St., Rooms 604 & 605,

NEW YORK.

BELTZ BROS.,

— SHIPPERS OF —

Grain, Flour and Mill Feed.

Corn Exchange,

MINNEAPOLIS, MINN.

MILTON SHIVE,

BROKER,

Grain Shippers' and Millers' Agent

FOR THE SALE OF

GRAIN AND MILL FEED,

Chamber of Commerce, PHILADELPHIA, PA.

SHIP YOUR GRAIN

— TO —

P. B. & C. C. MILES,

Commission Merchants,

PEORIA, ILL.

Established 1875.

LIBERAL ADVANCES.
QUICK RETURNS.

REFERENCES:—Commercial Nat. Bank, Peoria Savings, Loan &
Trust Co., Peoria.

GEO. N. REINHARDT & CO.,

Melrose Station, New York City.



We sell on Commission and buy direct,

HAY, GRAIN AND FEED.

Storage capacity, 8,000 bales, 30,000 bushels
Let us know what you have to offer.

VOLLKOMMER, BLOOMINGDALE & CO.,

COMMISSION MERCHANTS AND EXPORTERS OF HAY,

Kent Avenue and North Ninth Street, BROOKLYN, N. Y.

REFERENCES: First National Bank and Commercial Agencies.

CORRESPONDENCE SOLICITED.

L. M. WILSON, Treasurer and Manager.

T. H. WILSON, Associate Manager.

EMPIRE GRAIN & ELEVATOR CO.,

BINGHAMTON, N. Y.,

SHIPPERS OF

Grain, Hay, Mill Feed,

Also Linseed Meal, Cotton Seed Meal, Hominy Meal, Gluten Meal,
Feed Wheat, Buckwheat Grain, Corn Meal, Chop Feed, Etc., Etc.

PLEASE SEND SAMPLES AND PRICES.

ELEVATOR AND WAREHOUSE AT BINGHAMTON, N. Y.

CORRESPONDENCE SOLICITED.

COMMISSION CARDS.

JULIUS FLEISCHMANN, President,
CASPER H. ROWE, Sec'y and Treas.
W. W. GRANGER, JR., Manager.

UNION GRAIN & HAY CO.,

CINCINNATI, OHIO.

CONSIGNMENTS SOLICITED.

Will buy or sell in any quantity (car lots only). Want all the Rye
we can buy at market values. Write for quotations.

ESTABLISHED 1863.

E. L. ROGERS & CO.,

Commission Merchants,

GRAIN, FLOUR, SEED, HAY AND STRAW,

135 S. Second St., (Chamber of Commerce) PHILADELPHIA, PA.

Liberal advances made on consignments. Market reports furnished
gratuitously on application. Correspondence solicited.

References: { Corn Exchange National Bank.
Manufacturers National Bank.
Merchants National Bank.

LOUDON & CO.,

Grain Commission Merchants,

Chamber of Commerce Building,

CINCINNATI, OHIO.

Will honor sight drafts for reasonable advance on consignment
with bills of lading and certificates of weight and inspection attached
Reference: Merchants' National Bank.

WILHELM MUHLE,

HAMBURG, GERMANY,

Agent:

**Corn, Grain, Flour, Provisions,
Mill Feed.**

Correspondence Solicited from Exporters and Shippers.

G. H. D. JOHNSON.

E. P. BACON.

G. W. POWERS.

E. P. BACON & CO.,
Grain Commission Merchants,

Consignments may be made to us either at Milwaukee, Chicago, or
Minneapolis, and drafts may be made on us at either place without
regard to the destination of consignments against which they are
made.

No. 17 Chamber of Commerce, Milwaukee.

Branch Offices:

84, 85 and 86 Board of Trade,
CHICAGO, ILL.

30 Chamber of Commerce,
MINNEAPOLIS, MINN.

BUY YOUR GRAIN

FROM

SUFFERN, HUNT & CO.,

ROOMS 10 AND 11 FENTON BLOCK,

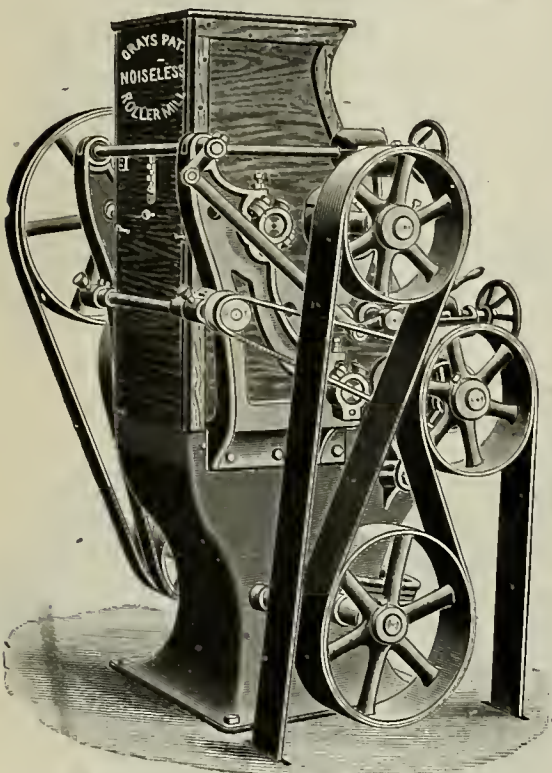
DECATUR, - ILLINOIS.

We make a specialty of White and Yellow Corn for milling pur-
poses. We also handle mixed Corn, white and mixed Oats, Mill Feed
and Hay. Can ship any blue. We want your business.
Send for prices.

CORN AND FEED ROLLS

FOUR SIZES: 6x12, 9x14, 9x18, 9x24—TWO BREAKS EACH.

DO YOU NEED ONE THIS FALL?



**Fast Grinders.
Fine Grinders.
No Stone Dressing.
They Save Time,
Power and
Attention.**

Our Prices Will Surely Win Your Order.

T. O. KILBOURN of Spring Valley, Minn., says: "I am grinding 85 bushels of mixed feed by the watch on a 9x18 Allis 2-break Roller Mill." Hundreds of other users speak as highly.

**TRY US ON
SHAFTING, PULLEYS,
BELTING,
AND ALL KINDS OF
MILL AND ELEVATOR
SUPPLIES.**

THE EDWARD P. ALLIS CO.,
Reliance Works, MILWAUKEE, WIS.

ELEVATORS.

Do You Want to Sell Yours?
Do You Want to Buy One?
Or Rent One?

If so, you should advertise in the

AMERICAN ELEVATOR AND GRAIN TRADE,

which reaches a hundred times as many of the kind of people you want to interest as any daily paper in the country.

If you want to attract the attention of grain men, advertise in the

AMERICAN ELEVATOR AND GRAIN TRADE.

Send us your advertisement and write for rates. *They are low.*

MITCHELL BROS. CO.,
184 and 186 Dearborn St., CHICAGO, ILL.

ENGINES AND BOILERS.

To get most reliable and best power for least money, send for pamphlet and state your wants to

JAMES LEFFEL & CO.,
SPRINGFIELD, OHIO, or 110 Liberty St., N.Y. City.

AMERICAN MILLER.

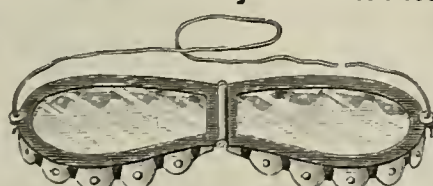
PUBLISHED BY

MITCHELL BROS. CO., Chicago.

\$2.00 PER YEAR.



The Warren Eye Protector.



Patented January 12, 1892, February 21, 1893.

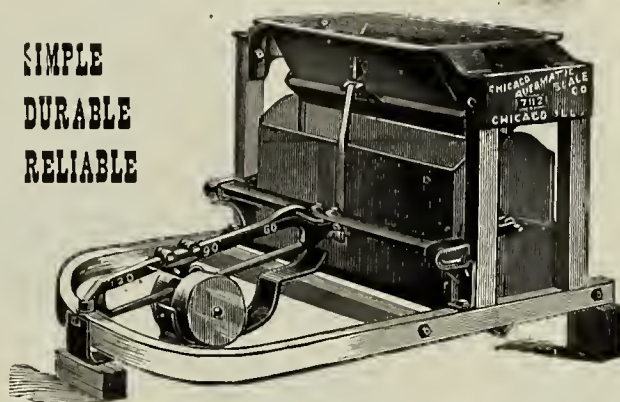
Saves eyes harmless from dust or sun. Invaluable in mills or for harvesters. Does not obstruct sight. By mail on receipt of 50 cents.

THE NOUS VERRONS CO.,
SOLE MANUFACTURERS,
P. O. Box 3273, Boston, Mass.

AUTOMATIC SCALES

FOR GRAIN, MALT, ETC.

**SIMPLE
DURABLE
RELIABLE**



WARRANTED TO

**Weigh Accurately
Register Correctly**

AND

Work Continuously

For further particulars apply to

CHICAGO AUTOMATIC SCALE CO.,
316 Chamber of Commerce, Chicago, Ill

THE OLD WAY.



For NEW and BEST Way
ADDRESS

UNION IRON WORKS,

DECATUR, ILL.,

Manufacturers of the CELEBRATED

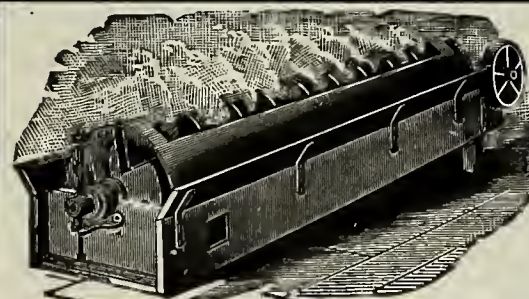
Western Shellers and Cleaners

The "Best in the World."

Elevator Supplies of All Kinds a Specialty.

We are the Pioneer Elevator Builders of the West, and claim priority in the building of Cheap Elevators with Increased Conveniences. Don't BUILD until you get our Plans and Prices.

Write for Catalogue.

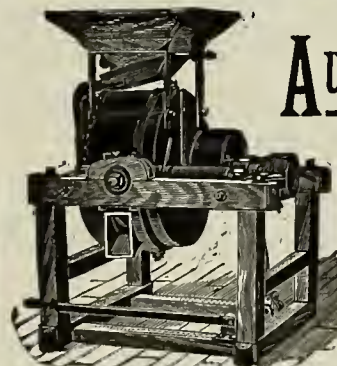


STEAM DRYER

For Cornmeal, Hominy, Buckwheat, Rice, and all kinds of Cereal Products; also Sand, Coal dust, etc.

Drying Cylinder made entirely of iron. The machine has few parts and is not liable to get out of order. Automatic in its operation, requiring no attention. Double the capacity of any other Dryer sold for same price.

USED AND RECOMMENDED BY LARGEST AND BEST MILLS.



Automatic Adjustment Mill.

The adjustment is positive and automatic, utilizing every part of the grinding surfaces. Can be started or stopped at pleasure, without stopping the power. Is dressed without taking the shaft out of its boxes, or the belt off the pulley.

Comprises all Recent Improvements for Producing Goods at Lowest Cost.

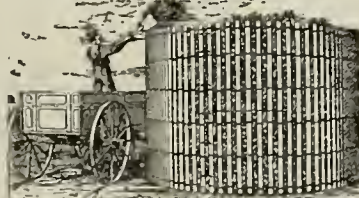
SEND FOR CIRCULAR.

THE CUTLER CO., North Wilbraham, Mass.

Adam's Portable Corn Crib

PRACTICAL. CHEAP. CONVENIENT.

You Can Use Them, You Can Sell Them.



If you want a little extra crib room, or if you want to make a little extra money, buy Adam's Portable Corn Crib. Send for Prices, Freight, Etc.

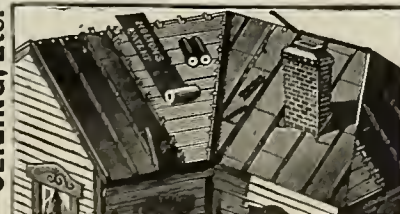
Patented June 27, 1893.

W. J. ADAM, JOLIET, ILL.

HOLTON IRON AND STEEL ROOFING CO., New Lisbon, Ohio.



Manufacturers of
**ROOFING,
SIDING,
CEILING, Etc.**

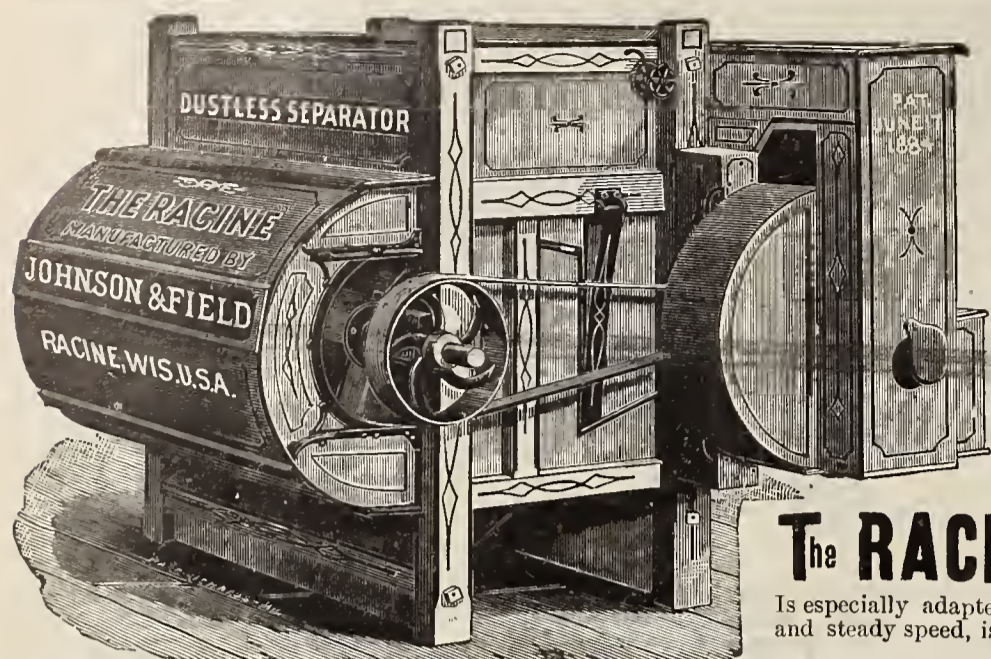


Millions of feet in use. Our work is second to none. Fully guaranteed of the best materials and construction.



Agents Wanted Everywhere.

Information Furnished on Application.



"THE RACINE" Dustless Grain Separator

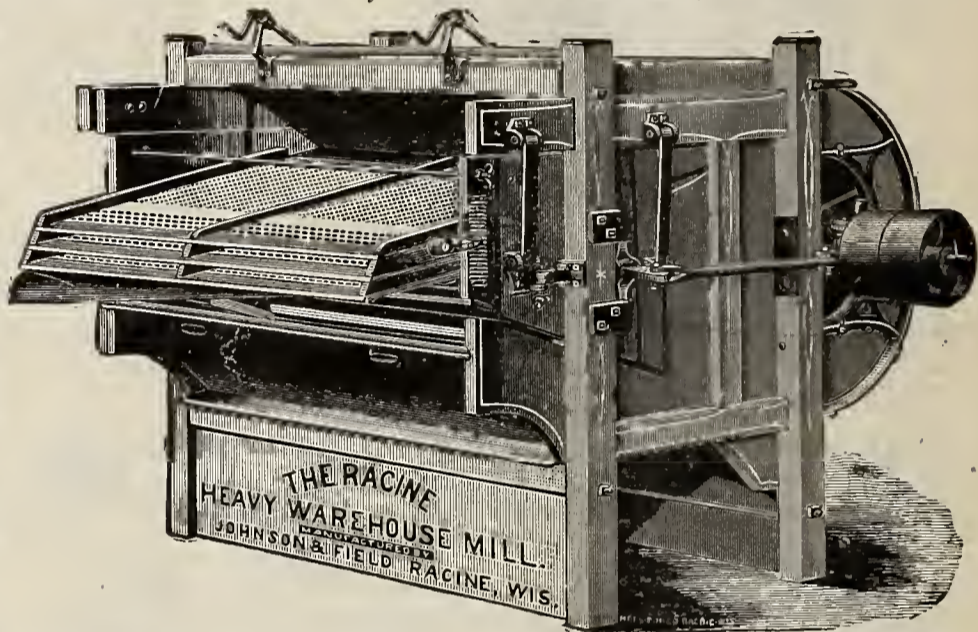
EMBODIES MORE POINTS OF EXCELLENCE

Than any other machine offered for similar purposes, and is **Light Running, Large in Capacity, Perfect in Separation** and with **Great Strength and Durability**. These machines have no equal. Adopted and Indorsed by many of the largest Mills and Elevators in the country.

Made in different sizes to meet different requirements.

The RACINE HEAVY WAREHOUSE MILL

Is especially adapted for horse power use, is supplied with **PATENT GOVERNOR PULLEYS**, has an even and steady speed, is built extra heavy and bolted throughout. This machine has large capacity and is more durable than any other Warehouse Mill made.



IMPROVED CALDWELL Gasoline Engine

GAS OR GASOLINE FOR FUEL.

No Engineer! No Boiler! No Fire! No Smoke! No Ashes! No Danger!

Cost of fuel GUARANTEED not to exceed one cent per H. P. per hour.

OIL AND STEAM ENGINES

From 1 to 100 Horse Power.

ELEVATOR

MACHINERY AND SUPPLIES,

Scales, Warehouse Trucks, Elevator Boots, Buckets and Bolts, Pulleys, Shafting, Belting, Grain Spouts, Etc.

Send for our catalogue and prices before placing your orders.

JOHNSON & FIELD CO., RACINE, WIS.

TO SUBSCRIBERS!

To the subscriber to the **AMERICAN ELEVATOR AND GRAIN TRADE** who first cuts out and fills in the coupon given herewith and guesses nearest to

The Amount of Wheat Exported from the United States during January,

we will give the sum of **FIFTY DOLLARS**.

Those who are now, or who become on or before January 1, 1894, subscribers to the only journal devoted exclusively to the interests of the grain trade, will be privileged to fill out as many blank tickets as they can secure from this journal and the **AMERICAN MILLER**. No guesses will be accepted after January 1, 1894.

No guesses will be accepted from anyone not a subscriber at the time the guess is sent in.

The amount of wheat reported by the Bureau of Statistics, in its February report, to have been exported in the form of grain, not flour during January will be accepted as correct.

The ticket will be published in each issue of the **AMERICAN ELEVATOR AND GRAIN TRADE** and the **AMERICAN MILLER** published during the rest of 1893.

[OUR GUESSING TICKET.]

\$50

PRIZE GUESSING CONTEST,
FOR SUBSCRIBERS OF THE
AMERICAN ELEVATOR & GRAIN TRADE

I AM A SUBSCRIBER FOR THE JOURNAL NAMED ABOVE AND THINK THAT DURING THE MONTH OF JANUARY, 1894, THE UNITED STATES WILL EXPORT _____ BUSHELS OF WHEAT. THE AMOUNT REPORTED BY THE BUREAU OF STATISTICS OF THE AGRICULTURAL DEPARTMENT IN ITS FEBRUARY REPORT TO BE ACCEPTED AS CORRECT.

Name _____

County _____

Town _____

State _____

Fill out the above ticket and send it to

MITCHELL BROS. CO., 184 Dearborn St., CHICAGO, ILL.

C. D. HOLBROOK,

DEALER IN

Grain Elevator Machinery and Supplies

239 4th Ave. South, Minneapolis.

SPECIALTIES: Steam and Gas Engines, Car Pullers, Oat Clippers, "Automatic" Power Grain Shovels, Improved Excelsior Combined Elevator, Separator for all kinds of Grain, Double and Quadruple Flax Reels, Combination Flax and Grain Cleaners, Improved Cockle Machines.

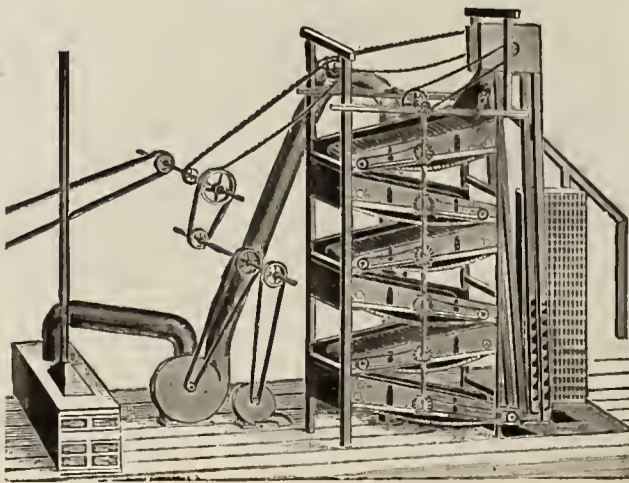
Carry in Stock full line of Shafting, Hangers, Pulleys, Sprockets, Elevator Boots, Tanks, Link and Rubber Belting, Farm and Warehouse Fanning Mills, Sweep, Overhead and Tread Horse Powers, Extras of all kinds for Horse Power, Hand and Power Corn Shellers and Feed Mills, Platform, Wagon and Elevator Scales, Flexible Loading and Shipping Spouts, Steel Scoops, Pinch Bars, Grain Samplers, Grain and Seed Testers, Bag Holders, Bag Trucks, Etc.

F. H. C. MEY CHAIN BELTING ENGINEERING WORKS,

APPROVED APPLIANCES FOR

Elevating, Conveying and Transmission of Power

Builder of Dryers for Grain, Brewery Grains, Refuse from Glucose, Starch and Distillery Works, Etc., and Manufacturer of Elevator Buckets.

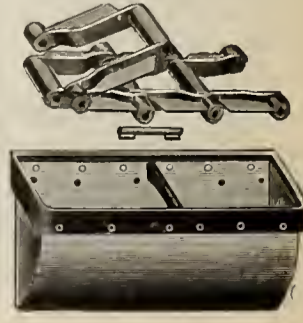


F. H. C. MEY,

64 to 68 Columbia St.,

BUFFALO, N. Y., U.S.A.

Send for Catalogue.





J. B. DUTTON'S Patent Automatic Grain Scale,

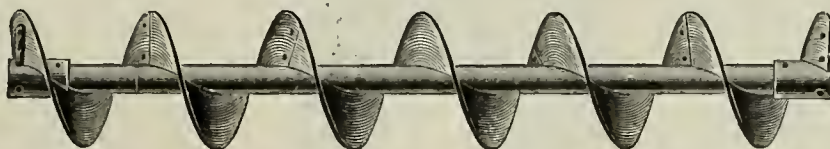
FOR USE IN
ELEVATORS, DISTILLERIES, MALT HOUSES, FLOUR MILLS, ETC.

ACCURATE AND RELIABLE AT ALL TIMES. SCALES SENT ON 30 DAYS' TRIAL.
SEND FOR CIRCULAR AND PRICE LIST.

ADDRESS:

J. B. DUTTON, 111 & 113 West Congress St., DETROIT, MICH.

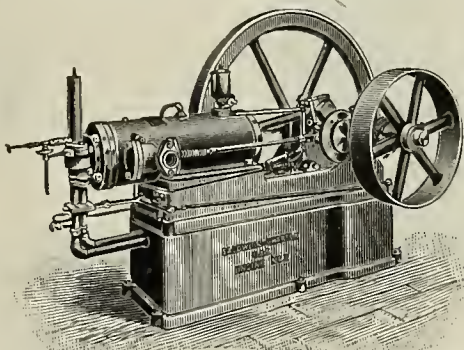
CONVEYING, ELEVATING,
AND
POWER TRANSMITTING
MACHINERY.



CALDWELL STEEL CONVEYOR.
Manufactured exclusively by us at Chicago, with latest improvements.

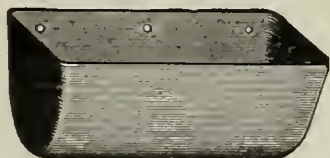
AUTOMATIC POWER GRAIN
SHOVELS.
SOUTH BEND WOOD SPLIT
PULLEYS.

H. W. CALDWELL & SON COMPANY,
127, 129, 131 and 133 W. Washington St.
CHICAGO, ILL.



SPROCKET WHEELS, LINK BELTING, ELE-
VATOR BOOTS, BOLTS AND BUCKETS,
SHAFTING, BELTING, HANGERS,
PULLEYS, GEARS, CAR
PULLERS, ETC.

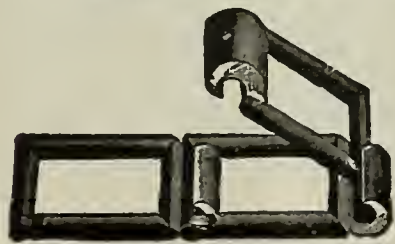
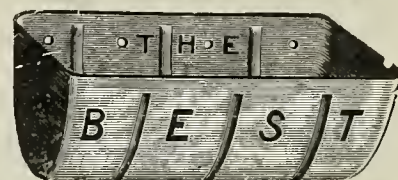
EVERY SEAMLESS STEEL
ELEVATOR BUCKETS.



CALDWELL CHARTER GASOLINE AND GAS ENGINES.
2 TO 75 ACTUAL HORSE POWER.

These engines use gasoline from tanks lower than the engines. They are
simple, reliable and safe. We build them substantially, of best
material, and we know they are the best engines made.
PLEASE SEND FOR CATALOGUE.

CALDWELL CORRUGATED SEAMLESS
STEEL ELEVATOR BUCKETS.



JEFFREY
Chain Belting.

ALSO

Malleable, Steel,
Wrought and Special

CHAINS.

Send for Our 1893 Catalogue.

**ELEVATORS,
CONVEYORS.**

The Jeffrey Mfg. Co.
COLUMBUS OHIO.

New York Branch, 163 Washington St.



Everyone who Buys or Sells Grain should
subscribe for the

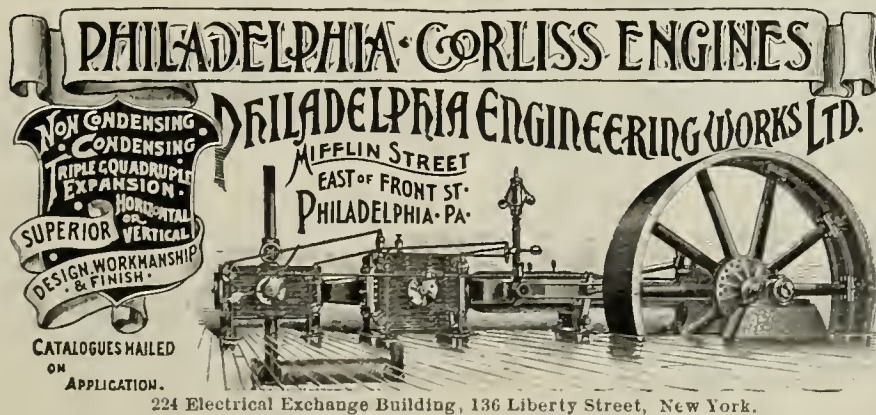
**American Elevator
And Grain Trade,**

Subscription Price only \$1 per Year.

WRITE TO

MITCHELL BROS. CO. Publishers

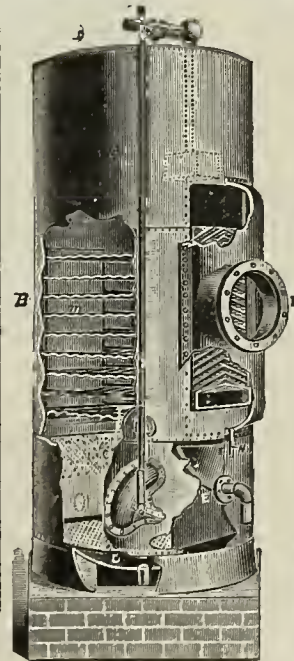
184 Dearborn St., Chicago.



CATALOGUES MAILED
ON APPLICATION.

224 Electrical Exchange Building, 136 Liberty Street, New York.

**STILWELL'S PATENT
LIME EXTRACTING
HEATER AND FILTER
COMBINED.**



Is the ONLY
LIME-EXTRACTING
HEATER
that will prevent
Scale in
Steam Boilers.
Removing all im-
purities from
the water before
it enters the
Boiler.

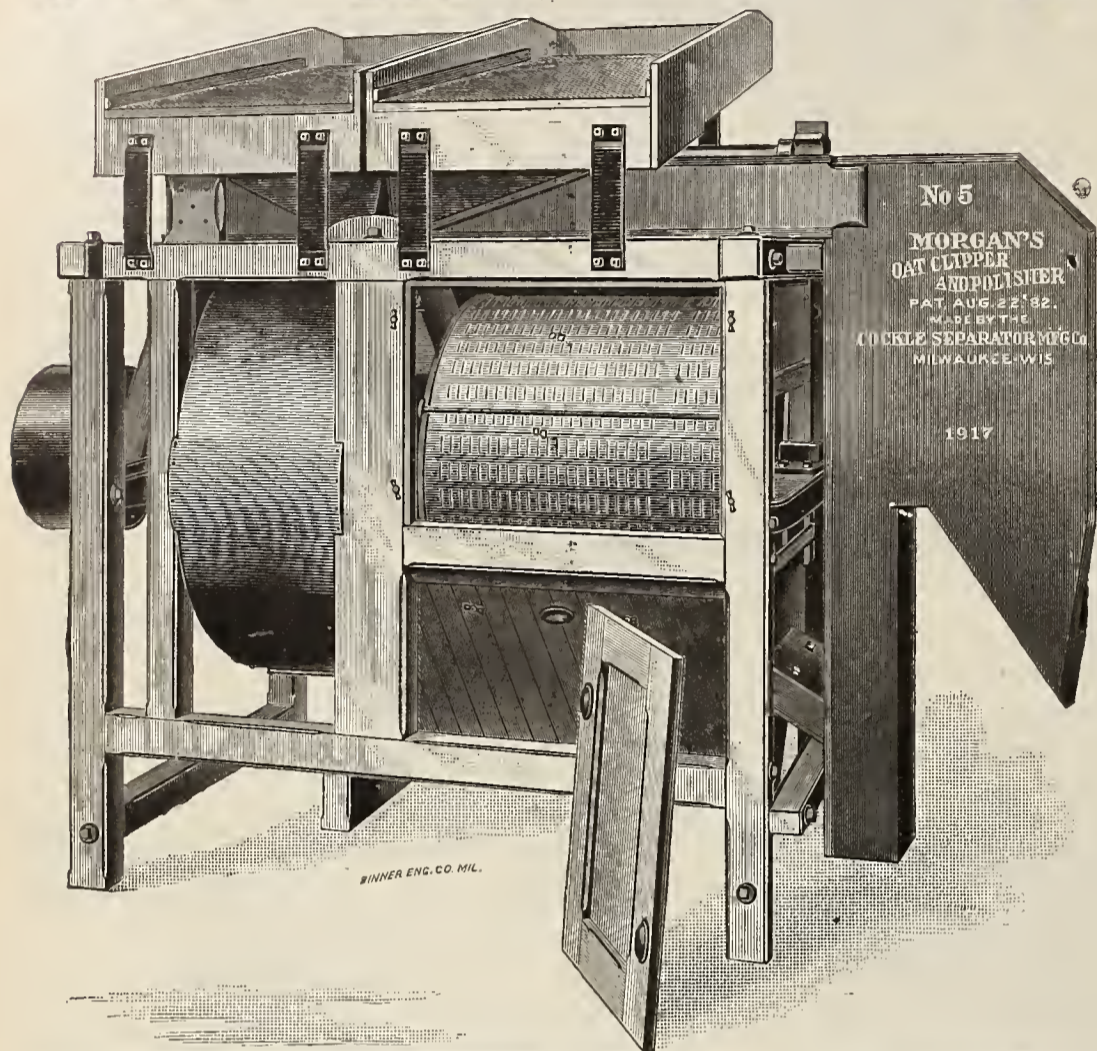
Thoroughly Tested
OVER 8,000
of them in daily use

This cut is a fac-
simile of the appear-
ance of a No. 5 Heat-
er at work on ordi-
nary lime water,
when the door was
removed after the
Heater had been run-
ning two weeks.
Illustrated Cata-
logues.

**Stilwell-Bierce & Smith-Vaile Co.,
DAYTON, OHIO.**

American Elevator and Grain Trade.
—PUBLISHED BY—
MITCHELL BROS. CO., CHICAGO
\$1.00 PER ANNUM.

THE MORGAN OAT CLIPPER.



The best on the market. Has largest capacity; does most even clipping and requires less power than any clipper manufactured.

It will pay parties in need of such a machine to write us. Prices have been *greatly reduced*.

COCKLE SEPARATOR

MANUFACTURING COMPANY,

MILWAUKEE, WIS.

\$2.00



PUBLISHED THE FIRST DAY OF EVERY MONTH.

ESTABLISHED IN 1873.

The Best Exponent of Modern Milling.

SUBSCRIPTION PRICE,

\$2.00 PER YEAR.

Each number is worth the cost of an entire year's subscription to every man in the trade.

SEND FOR SAMPLE COPY.

ADDRESS,

\$2.50

— FOR —

BOTH

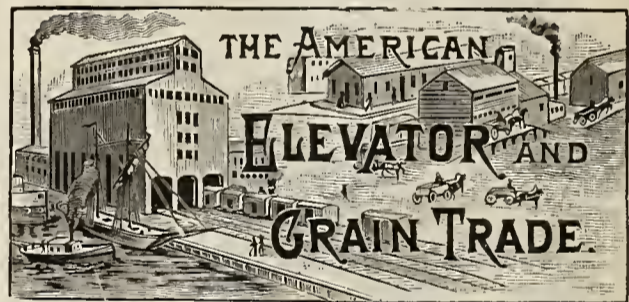
FOR ONE YEAR.

You can get such value nowhere else for your money. Many readers want a paper that comes twice a month. THE AMERICAN MILLER and THE ELEVATOR are offered at less than such a paper could be given for. You need them both in your business.

\$2.50

Two Papers a Month.

\$1.00



PUBLISHED THE FIFTEENTH OF EVERY MONTH

ESTABLISHED IN 1882.

Subscription Price, Only \$1.00 Per Year.

Each Number Contains 40 Pages of Valuable Matter.

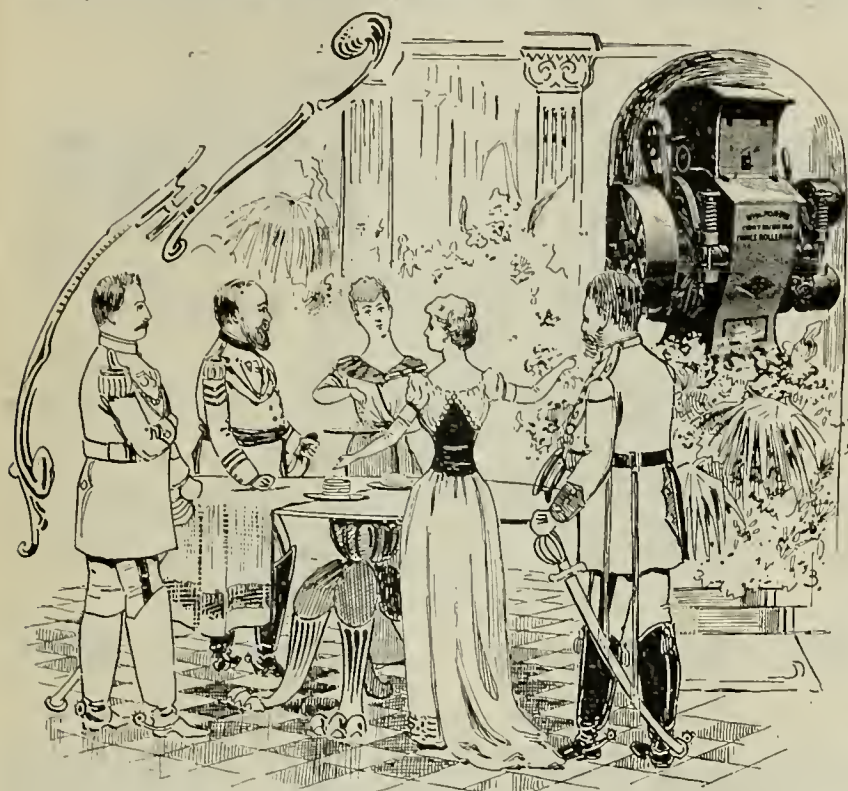
THE AMERICAN ELEVATOR AND GRAIN TRADE is the only paper of its class in the field.

MITCHELL BROS. CO.

PUBLISHERS,

184 & 186 Dearborn St., CHICAGO, ILL.

Light running. Easily managed.
Large capacity. Small power.
Easy to belt to.
For 10 years the best feed and meal grinder made.



IN FOREIGN LANDS.

Or, if no maid shall praise his worth,
He dreams that, far across the sea,
Some man or woman, girl or boy,
Will welcome him most joyfully.

Or, that some mighty warrior, soldier brave,
Will cry, "Though next day I be dead,
Now, while I have my life and health,
Give me my Willford-ground corn bread."

A FIRST-CLASS SCREENINGS MILL.

For pamphlet and particulars write to

Willford & Northway Mfg. Co., Minneapolis, Minn.

MILL BUILDERS, MILL AND ELEVATOR SUPPLIES,

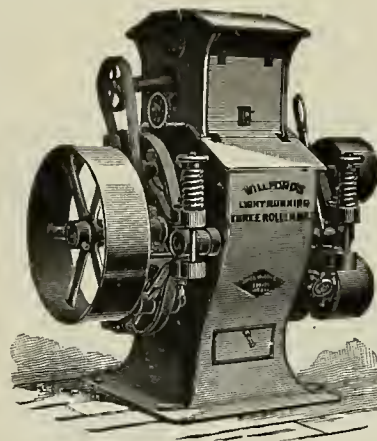
Shafting, Pulleys, Belting, Link Chain, Etc.

A Feed Roller Mill in an elevator makes many a dollar for its owners that would otherwise slip by them; it costs nothing extra for help and but little for fuel, yet is always ready to grind a grist or a carload of choice feed or fine cornmeal. When you are buying, buy the very best machine made for the work--and that is our

LIGHT RUNNING

Willford Three Roller Mill.

Three sizes: 30, 60, 125 bushels per hour, using 4, 7 and 10 horse power, respectively.



LET
US
SHARPEN
YOUR
FEED
ROLLS.

MONEY
CANNOT
BUY
A
BETTER.

WILLFORD LIGHT RUNNING THREE ROLLER MILL.

PATENTED.

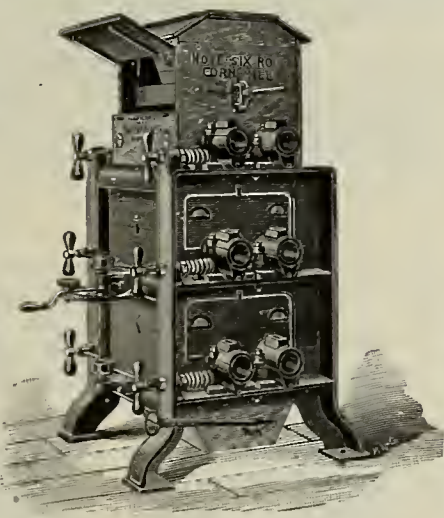
Solid cast iron frame. Solid, strong, durable.

A great worker and easily managed.

FOR GRINDING

Wheat, Oats, Corn, Rye, Barley, etc., there is, we believe, no machine equal in capacity, in quality of work and in durability to the

**Noye
Six-Roll
Corn AND Feed Mill.**



ELEVATOR

Heads, Boots, Belts, Buckets, Bolts, Power and Transmission Machinery, Complete Power Plants and General Furnishings, we can supply promptly and at reasonable prices.

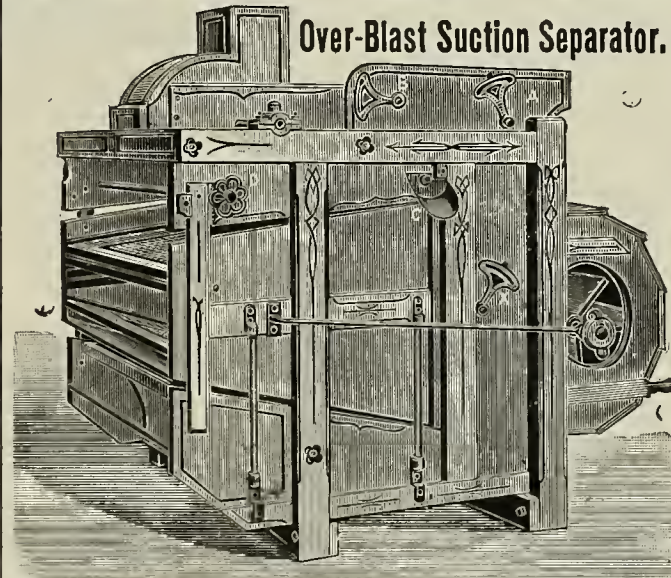
**THE JNO. T. NOYE MFG. CO.,
BUFFALO, NEW YORK.**

**THE CELEBRATED
A. P. DICKEY GIANT GRAIN CLEANERS.**

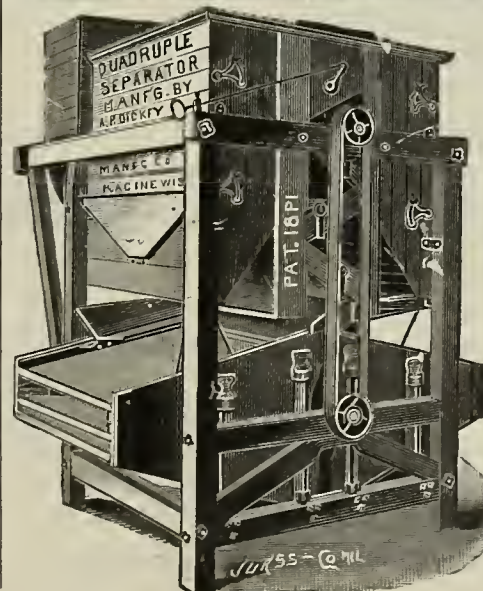
Over-Blast Suction Separator.

**THE
STANDARD
IN THEIR
LINE.**

*"Grain
Cleaned
to a
Standstill."*



Manufactured in any desired size and pattern, with capacities to accommodate the largest Elevator and Flouring Mills, or small Warehouses for hand use. Single and Double, End and Side Shake, and Dustless Separators, both Under and Over-Blast.



The Quadruple Suction Dustless Separator. Four separate suctions, independent of each other with sieves and screens, requiring less power, less floor space, lower in height, needing less bracing, has better and more perfect separations, and furnished with the only perfect force feed and mixer on the market. Guaranteed to clean Grain to any desired standard without waste once through this machine twice as well as any machine made.

For CIRCULARS and PRICES address

**A. P. Dickey Mfg. Co.
RACINE, WIS.**



Estimates furnished on application for
Transfer, Mixing and Storage Elevators.

We invite inspection of our designs and solicit correspondence, respecting
the construction of Grain Elevators.

ROOM 118, CORN EXCHANGE, MINNEAPOLIS, MINN.

J. A. CAMPBELL.

CLYDE T. CAMPBELL

OVER 30 YEARS' EXPERIENCE.

J. A. CAMPBELL & SON.,

3117 N Street, LINCOLN, NEB.,

DESIGNERS AND BUILDERS OF

GRAIN ELEVATORS,

Modern in Design, Durable in Construction, and Eco-
nomical and Convenient to Operate.

We use our own inventions to secure durability and convenience. Write us for
full specifications and estimates and save a heavy expense in remodeling or operating
a wasteful and ill-contrived elevator.

C. M. SECKNER, Prest.

J. H. BROWN, Sec'y and Treas.

THE SECKNER CONTRACTING CO.,

ARCHITECTS AND BUILDERS OF

GRAIN ELEVATORS

And General Contractors,

1234 AND 1235 UNITY BUILDING,
Telephone 5035 Main.

79-81 Dearborn Street,

CHICAGO, ILL.

TROMANHAUSER BROS.,

ARCHITECTS, CONTRACTORS, AND BUILDERS OF

GRAIN ELEVATORS.

Country, Transfer, Mixing, Marine,
and Terminal Storage Elevator Plants.

Plans Submitted and Estimates Furnished.

411 New York Life Building, - - MINNEAPOLIS, MINN.

IF YOU ARE { A MILL OWNER, } **YOU CANNOT AFFORD TO**
{ A MILLER, } **DO WITHOUT THE**
{ A MILLWRIGHT, } **AMERICAN MILLER.**

Subscription Price, { **MITCHELL BROS. CO., 184 Dearborn St., CHICAGO, ILL.**
Only \$2.00 Per Year. }

SIMPSON & ROBINSON CO.,

DESIGNERS AND BUILDERS OF

GRAIN ELEVATORS,

Working, Storage, Cleaning, Mixing and Marine.

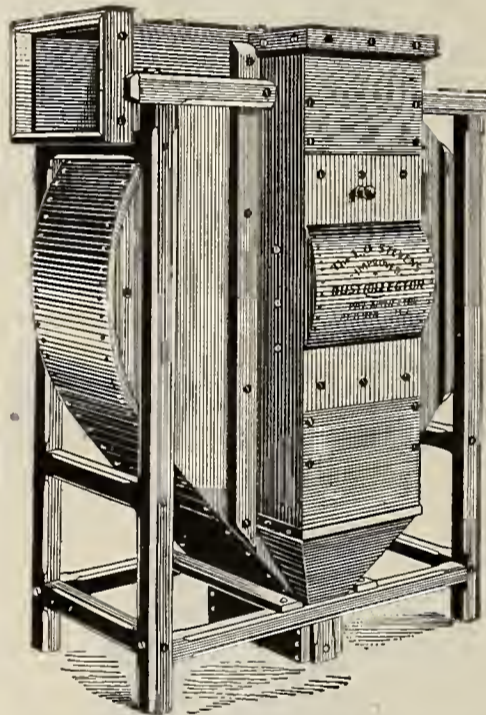
Plans, specifications and estimates furnished on short notice.

Our Single Leg Rope Drive
reduces
fire risk and friction.

The Simpson Double Jointed
Distributing Spouts
economize space and labor.

215 Flour Exchange. - MINNEAPOLIS, MINN.

The Stevens Improved Dust Collector



Most Complete, as it is framed and
ready for connection to and from spouts.

Will not Choke, Clog or Dough,
as it has no valves or internal machinery.

Cheapest, as it requires no expert labor
to set it.

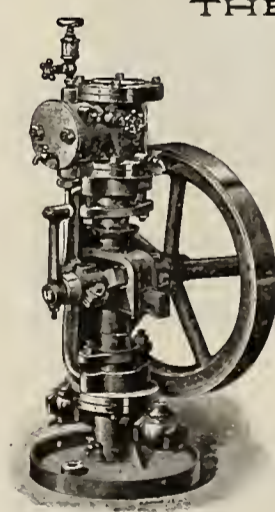
Most Efficient, as it has double vac-
uum chambers which settle practically
all dust.

MADE AND GUARANTEED SOLELY BY

Western Mill Machinery Company

PEORIA, ILLINOIS.

SOLE MAKERS OF:
STEVENS' IMPROVED DUST COLLECTOR.
STEVENS' WHEAT ENDER AND BRUSH
FINISHER.
STEVENS' ADJUSTABLE COMBINED OAT
CLIPPER AND SEPARATOR.



RELIANCE.

THE "RELIANCE"

A PERFECT

BOILER FEEDER.

HUNDREDS IN USE

INTERCHANGEABLE PARTS.

Get Special Circular from

DECATUR NOVELTY WORKS,

DECATUR, ILL.

WESTERN IRON & SUPPLY CO.,
St. Louis, Mo.

JAMES B. CLOW & SON,
Chicago, Ill.



SUBSCRIBE
FOR THE
AMERICAN MILLER.

PUBLISHED BY
MITCHELL BROS. CO., Chicago

\$2.00 PER ANNUM.
\$1.00 for Six Months.

Established 1828.

BOSTON BELTING CO.,

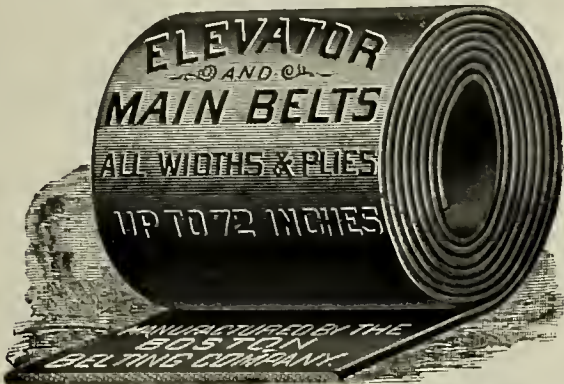
JAMES BENNETT FORSYTH, Manufacturing Agent and General Manager.

OLDEST AND LARGEST MANUFACTURERS IN THE WORLD OF

Vulcanized Rubber Goods

FOR MECHANICAL PURPOSES.

Rubber
Belting,
Packings,
Gaskets,
Springs,



Rubber
Hose,
Valves,
Rings,
Tubing.

256, 258 AND 260 DEVONSHIRE STREET, BOSTON.
100 CHAMBERS STREET, NEW YORK.

SALESROOMS:

14 North 4th St., Philadelphia, Pa. 161-165 W. Pearl St., Cincinnati, O. 8th St. & Washington Ave., St. Louis, Mo.
26 Light St., Baltimore, Md. 109 Madison St., Chicago, Ill. 1221 Union Ave., Kansas City, Mo.
90 Pearl St., Buffalo, N. Y. 380 E. Water St., Milwaukee, Wis. 405-407 Market St., San Francisco, Cal.
150 Water St., Cleveland, O. 268-270 East 4th St., St. Paul. 137 & 139 S. Meridian St., Indianapolis, Ind.

JAMES STEWART & CO.,

Designers and Builders

—OF—

GRAIN ELEVATORS,

ST. LOUIS, MO.

Our work in 1892 was as follows:

1,000,000-bushel elevator, Galveston, Texas, for Galveston Wharf Co.
403,000-bushel elevator, New Orleans, La., for Illinois Central R'y Co., with 1,255 ft. belt conveyor to river and grain dock.
100,000-bushel transfer house, Coffeyville, Kan., for Mo. Pac. R'y Co.
125,000-bushel flaxseed elevator, St. Louis, for Mound City Paint & Color Co.
57,000-bushel storage elevator, Hannibal Mo., for Pindell Bros.
500,000-bushel elevator, New Orleans, La., for Texas & Pacific R'y Co., with 700 ft. belt conveyor to river and grain dock.
150,000-bushel storage house, Charleston, Mo., for Crenshaw & Beckwith.
100,000-bushel mixing house, St. Joe, Mo., for Gregg Bros.
100,000-bushel transfer elevator, St. Louis, for Lewis-Sharpe Com. Co.

GRAIN ELEVATOR MACHINERY AND CORN MILLS.

COMPLETE OUTFITS FOR FLOUR MILLS, HOMINY MILLS AND ROLLER PROCESS CORN MILLS.

MEAL AND GRAIN DRYERS.

Horse Powers, Engines, Pulleys, Belting.

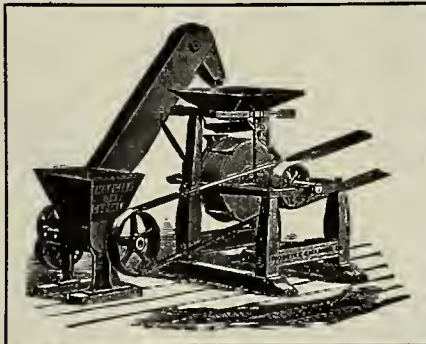
Corn and Wheat Cleaners,

Elevator Cups and Bolts,

Hominy Mills, Roller Mills,

Meal Bolts and Purifiers,

And Everything needed in the Handling and Grinding of Grain.



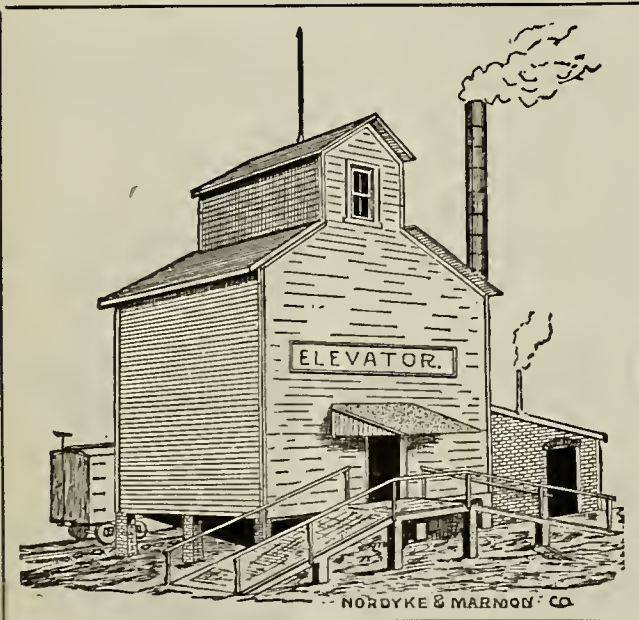
28 SIZES AND STYLES OF

PORTABLE CORN MILLS,

With or Without Bolts and Crushers.

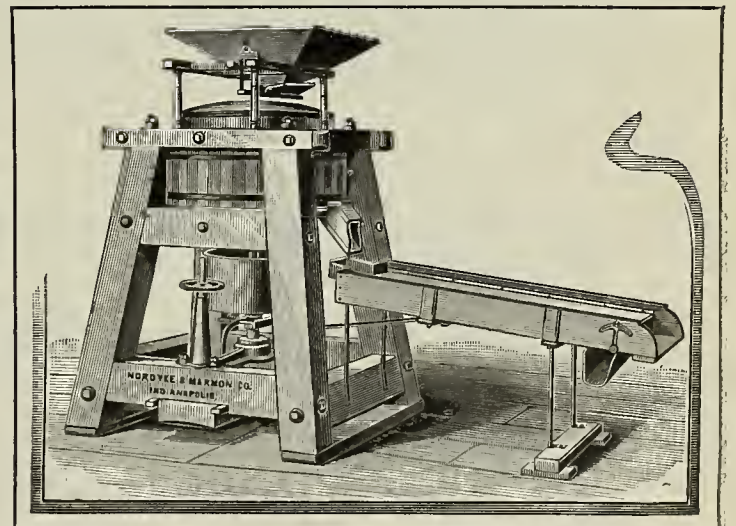
Received First Premium at Cincinnati, St. Louis, New Orleans, Louisville and Indianapolis Fairs and Expositions.

BUY OUR LOW PRICED COUNTRY GRAIN ELEVATORS.



Send \$20.00 for working plans of a 5,000-bushel Grain Elevator costing \$1,000.00, complete with power and machinery, warranted to handle grain faster and cheaper than any other known device. Also, larger sizes the same ratio in price. Catalogue, with plans and full prices of machinery, sent upon application.

ADDRESS



NORDYKE & MARMON CO., - Indianapolis, Ind.

DUST! DUST!



Gibbs' Patent Dust Protector protects the nose and mouth from inhalations of poisonous dust; invaluable in mills, elevators and every industry where dust is troublesome. Perfect protection with perfect ventilation. Nickel-plated protectors \$1. postage 4c. Circulars free. Agents wanted.

Gibbs Respirator Co., 30-36 La Salle Street, - CHICAGO.

American Elevator and Grain Trade.

—PUBLISHED BY—

MITCHELL BROS. CO., CHICAGO.

\$1.00 PER ANNUM.

FRANK KAUCHER, GRAIN ELEVATOR ARCHITECT,

A Complete Plant of Any Known Capacity Under One Contract.

410 German American Bank Bldg.,

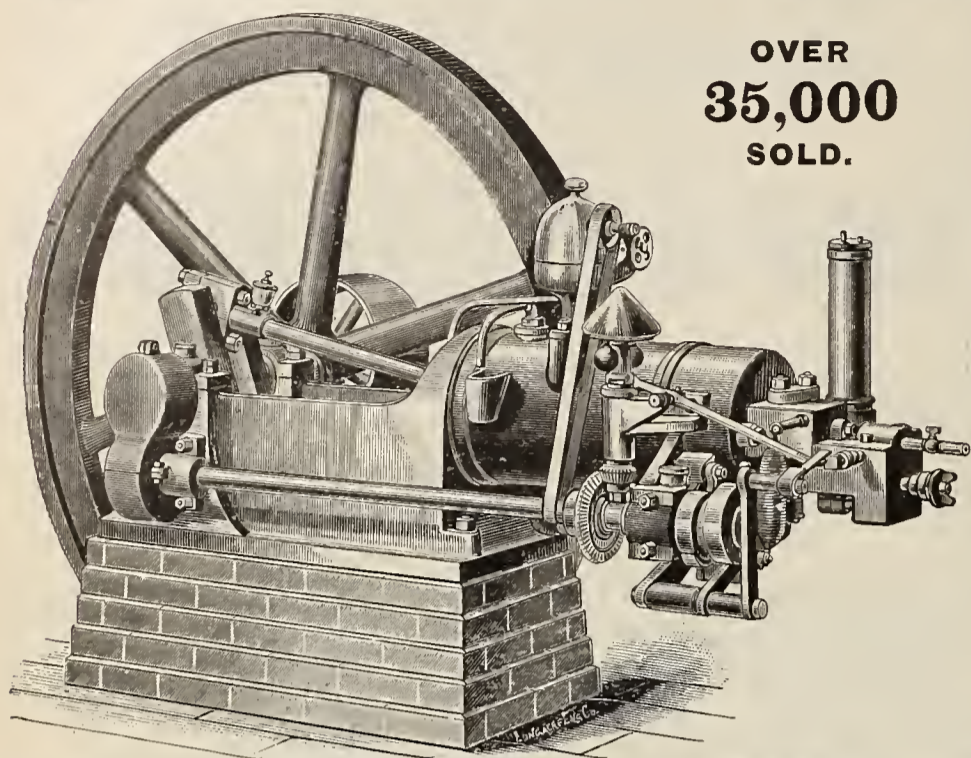
ST. JOSEPH, MO.

TELEPHONE No. 225.



Subscribe for the American Elevator and Grain Trade and the American Miller; both one year \$2.50. Addressee MITCHELL BROS. CO., Chicago.

The Modern Wonder.



OVER
35,000
SOLD.

OTTO GASOLINE ENGINE

WORKING WITHOUT BOILER, STEAM, ENGINEER.
COAL, ASHES, OR DANGER.

125 * Medals * and * Diplomas.

Capacity of Works: 800 Engines per Year.
Sizes: 2 to 60 Horse-Power.

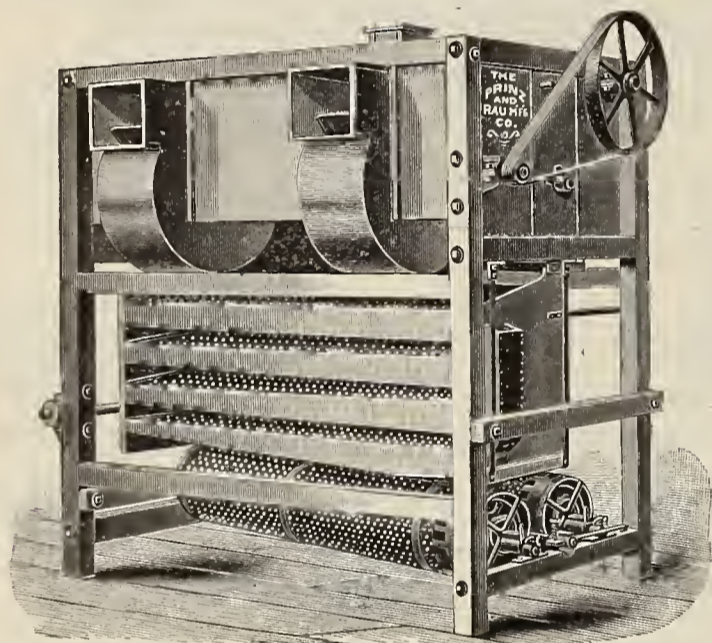
Best and Cheapest Power for **GRAIN ELEVATORS,**
FLOUR AND FEED MILLS, CONVEYORS, ETC.

OTTO GAS ENGINE WORKS,

OFFICES: 33 Walnut St., Phila.
245 Lake St., Chicago.
31 S. Penna. St., Indianapolis.
107 S. 14th St., Omaha.

THE PRINZ.

Oats Separator.



Cockle Separator.

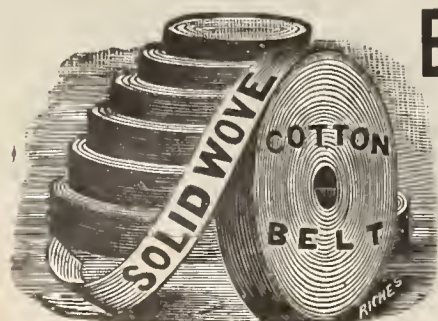
OUR COMBINED

Oats, Screenings and Cockle SEPARATOR

Have met with the largest success of any separator heretofore made.
Write for circulars and names of parties using the same to

THE PRINZ & RAU MFG. CO.,

659, 661, 663 East Water St., MILWAUKEE, WIS.



Elevator AND Mill Supplies
Leather, Cotton, Rubber

BELTING

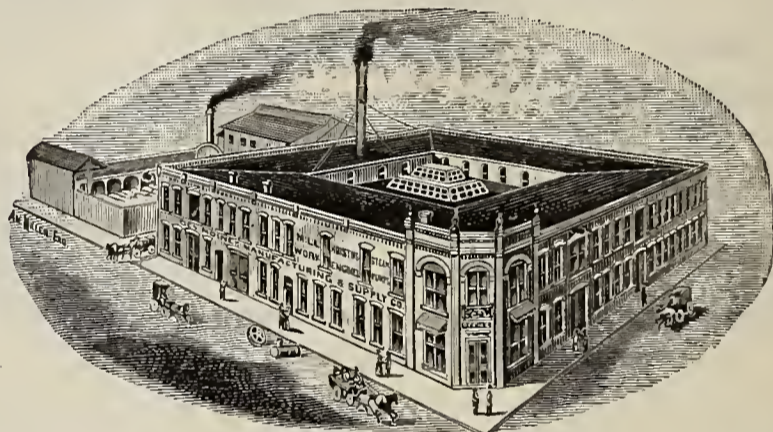
Elevator Buckets, Bolts, Mill Irons, Etc.
Prices Close, and Quality the Best.

THE CASE MFG. CO., Columbus, O.

DES MOINES MANUFACTURING & SUPPLY CO.,

MANUFACTURERS AND DEALERS IN ALL KINDS OF

ELEVATOR MACHINERY & SUPPLIES!



ENGINES AND BOILERS,

Iron Pipe Fittings and Brass Goods, Pulleys, Shafting, Elevator Buckets and Gears.

Correspondence Solicited.

Estimates Furnished for Complete Plants.

Office and Works: 101 to 121 E. Court Ave., Des Moines, Ia.

An Offer to Hay and Grain Men.

THE AMERICAN ELEVATOR AND
GRAIN TRADE,

\$1.00 PER YEAR.

Monthly.

THE HAY TRADE JOURNAL AND
DIRECTORY,

\$2.00 PER YEAR.

Weekly.

BOTH FOR \$2.00.

ADDRESS EITHER

The Hay Trade Journal, OR
Canajoharie, N. Y.

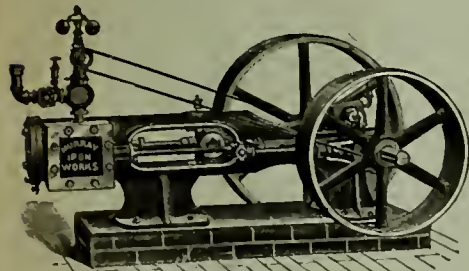
Mitchell Bros. Co.,
184 and 186 Dearborn St., Chicago,

THE MURRAY IRON WORKS CO.,

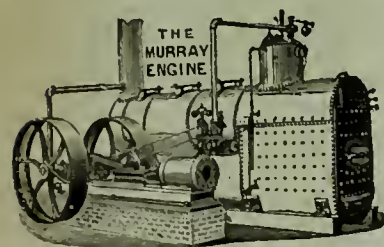
BURLINGTON, IOWA,

ENGINES AND BOILERS,

ALL STYLES AND SIZES.



Large Boilers Made in Two Sheets.
No Laps nor Seams in the Fire, Bottoms Smooth and Easily Cleaned.



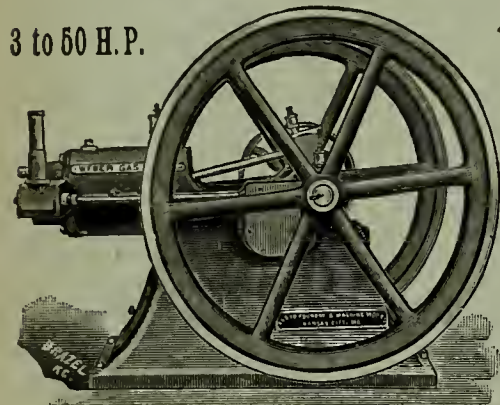
**STEAM PUMPS,
INJECTORS,
Valves and Fittings,
SHAFTING,
Pulleys, Hangers,
GEARING.**



WEBER GASOLINE ENGINES, Fully Guaranteed

Guaranteed cost of running, 1 cent per hour per H. P.

3 to 50 H. P.



"Ready for Work in Five Minutes After Entering Engine Room."

Office of W. H. HOLLINGER,
WOODBINE, KAS., April 29, 1893.
Weber Gas and Gasoline Engine Co.,
Kansas City, Mo.

GENTLEMEN:—In answer to yours of the 22d, will say that I am well pleased with the Weber engine, as it is simple and easily handled, and perfectly safe. With my engine I am driving a two-pair high-roller mill, 9x12, at the rate of twenty bushels per hour, two sets of elevators, one sheller, one cleaner, and one cutting machine. As you people understand, I cannot drive all this machinery at its full capacity at one time. I can drive three different machines at one time at full capacity. In selecting an engine I made a mistake by not taking one size larger engine. However, with all this, I can cheerfully recommend the "Weber" as being one of the best of powers for simplicity, durability, safety and economy, both in fuel and in saving of time, as the engine is always ready for work in five minutes' time after you enter the engine room.

Yours, W. H. HOLLINGER.

WEBER GAS & GASOLINE ENGINE CO., KANSAS CITY, MO.
Mention this paper. Address Drawer 250.

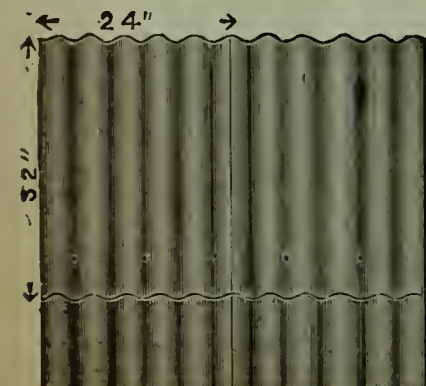
Roper's Practical Hand-Books for Engineers.

Hand-Book of Land and Marine Engines	Price, \$3 50
Hand-Book of the Locomotive	" 2 50
Catechism of High-Pressure Steam Engines	" 2 00
Use and Abuse of the Steam Boiler	" 2 00
Engineer's Handy-Book	" 3 50
Questions and Answers for Engineers	" 3 00
Care and Management of Steam Boilers	" 2 00
Instructions and Suggestions for Engineers	" 2 00
The Young Engineer's Own Book	" 3 00

These books embrace all branches of Steam Engineering—Stationary, Locomotive, Fire and Marine. Any engineer who wishes to be well informed in all the duties of his calling, should provide himself with a full set. They are the only books of the kind ever published in this country, and they are so plain that any engineer or fireman that can read can easily understand them. Address

Mitchell Bros. Co., 184 Dearborn Street, Chicago.

JAMES A. MILLER & BRO.,



Surviving Partners of KNISELY & MILLER BROS.,
129 & 131 South Clinton St, CHICAGO,
Slate, Tin and Iron

ROOFERS!

Manufacturers of
**CORRUGATED
IRON**

**For Roofing
And Siding**

This cut shows our method of fastening Corrugated Iron to Elevator Bins to allow for settling and raising.

BISULPHIDE OF CARBON,

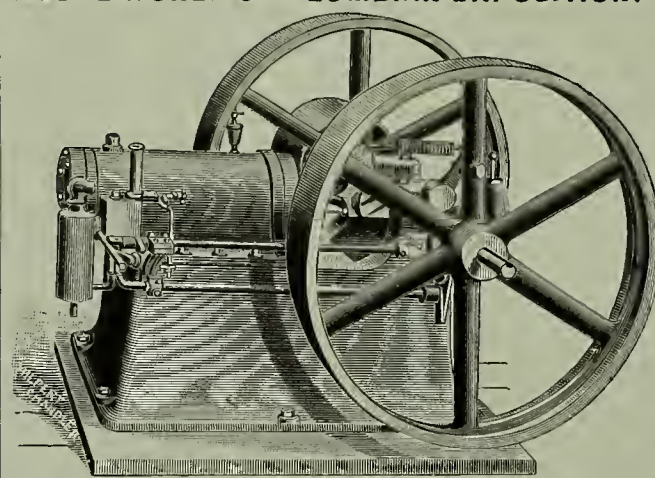
Of Special Grade for Killing Mill Insects.

Send for Instructions and Order Direct from
the Manufacturer,

EDWARD R. TAYLOR,
CLEVELAND, OHIO.

THE "LEWIS" IMPROVED Gas and Vapor Engine.

MEDAL WORLD'S COLUMBIAN EXPOSITION.



**No Danger.
No Boiler.
No Ashes.
No Fireman.
No Smoke.
No Lost Time.
Economical.
Durable.
Safe.**

The most perfect and desirable motor for Grain Elevators, Feed Mills, Dynamos, Ventilating Fans. Made in sizes ranging from 1 to 20 H. P.

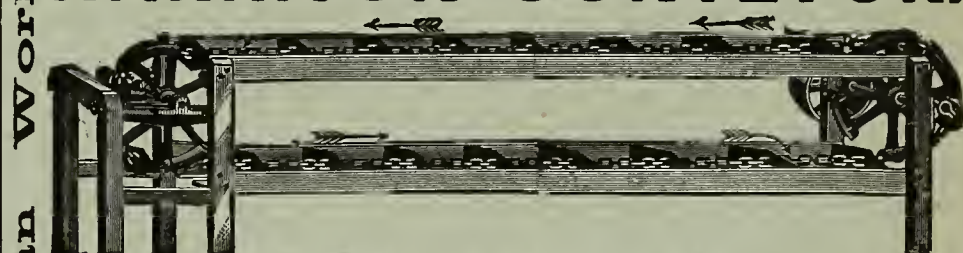
Write for catalogue to

WEBSTER MFG. CO.,

—o(((SOLE MAKERS,)))o—

Office and Factory, 1075 to 1097 W. 15th St., CHICAGO.

HARRISON CONVEYOR.



IT CARRIES All Wrought Iron. No Mixing of Grain.
Grain, Seeds, Ear Corn, Wet or Dry Malt, Coal, Sand, Sawdust, Tan Bark
Stone, Cinders, Clay, Paper Pulp, Cotton Seed, Etc., Etc.
SEND FOR CIRCULAR AND PRICE LIST.
BORDEN & SELLECK CO., Gen. Agts., 48 and 50 Lake St., CHICAGO, ILL.

THE BEST & CHEAPEST

BELTING

IN THE WORLD

STITCHED CANVAS BELTING

MANUFACTURED BY
THE CHESAPEAKE BELTING CO.
BALTIMORE, MD.

AMERICAN ELEVATOR AND GRAIN TRADE.

CONVEYORS

*** Elevator Buckets. *** Elevator Boots. *** Elevator Bolts. ***

THORNBURGH MFG. COMPANY,

MILL AND ELEVATOR SUPPLIES


110 & 112 SOUTH JEFFERSON STREET, CHICAGO, ILL.

Elevating and Conveying Machinery a Specialty.

*** PULLEYS. *** SHAFTING. *** HANGERS. ***

BELTING



LEWIS GAS ENGINES,
BELT CONVEYORS,
SYSTEM OF ROPE DRIVES,
COKER-METCALF POWER GRAIN SHOVELS,

All Awarded Medals at Columbian Exposition.

Write for Columbian Catalogue.

WEBSTER MFG. CO.,

Engineers, Founders and Machinists,
Office and Works, 1075-1097 West 15th St., CHICAGO.

THE HEIDENREICH CO.,

Engineers and General Contractors.

— BUILDERS OF —

GRAIN ELEVATORS,

Office, 539-545 The Rookery,
CHICAGO, ILL.

Cable Address: Jumper, Chicago.

REFERENCES :

CHAS. COUNSELMAN & Co.,	-	CHICAGO, ILL.
REQUA BROS.,	-	" "
CHICAGO, ROCK ISLAND & PACIFIC R. R. Co.,	-	" "
DULUTH IMPERIAL MILL Co.,	-	DULUTH, MINN.
W. C. FUHRER & Co.,	-	MT. VERNON, IND.
TALPEY BROS. & Co.,	-	KANSAS CITY, MO.
HIGGS COMMISSION Co.,	-	" "

IT MAY TAKE A YEAR,
Perhaps a Much Shorter Time

TO MAKE YOU REGRET YOU BOUGHT A CHEAP
GASOLINE ENGINE JUST BECAUSE IT IS CHEAP.

DURABILITY,
SIMPLICITY,
EASE of OPERATION,
RELIABILITY,
ECONOMY,

All of these are secured in the "CHARTER."

Are they not desirable?

Printed matter, containing testimonials showing scores of different purposes the power of the "Charter" is applied to, and under various conditions, by addressing

CHARTER GAS ENGINE CO.,
400 Locust Street, STERLING, ILL.

METCALF-MACDONALD CO.,

ARCHITECTS,
Engineers and Contractors,

— BUILDERS OF —

GRAIN ELEVATORS,

OFFICE, 1075 to 1097 West 15th Street.
CHICAGO, ILL., U. S. A.

We refer to any of the following for whom we have constructed plants:

Chicago & Grand Trunk R. R. Transfer, Elsdon, Ill., capacity 100 cars per day.
W. P. Harvey & Co., Kankakee, Ill., 125,000 bushels.
Fitchburg Railway, Boston, Mass., at Rotterdam Junction, N. Y., 450,000 bushels.
Middle Division Elevator Co., Chicago, Ill., transfer capacity, 30 cars per day.
Chas. Counselman, Chicago, Ill., 150,000 bushels.
A. C. Davis & Co., Horton, Kan., 120,000 bushels.
Dallas Elevator Co., Dallas, Texas, 750,000 bushels.
North Texas Mill and Elevator Co., McKinney, Texas, 150,000 bushels.
Columbia Elevator Co., Columbia, Tenn., 125,000 bushels.
West Chicago Street Railway Co., 150,000 bushels.
Ogdensburg Terminal Co., Ogdensburg, N. Y., 1,000,000 bushels.
Cockrell Grain & Commission Co., Dallas, Texas, 4 elevators.

SEEDS

THE ALBERT DICKINSON CO.,
Dealers in Timothy, Clover, Flax, Hungarian, Millet, Red Top,
Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, &c.
Warehouses: 115, 117 & 119 Kinzie St. **POP CORN.**
104, 106, 108 & 110 Michigan St. OFFICES, 115 KINZIE ST
1600 to 1614 Clark St. CHICAGO, ILL.

WITTE IRON WORKS CO.,

MANUFACTURERS OF



GASOLINE ENGINES.

ELEVATOR

—AND—

MILL MACHINERY,

Rope, Drives, Shafting,
Pulleys, Boxes, Couplings, Etc.

KANSAS CITY, MO.

